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**ERBE/NOAA-9 Observations  
For the FIRE/SRB Wisconsin Experiment Region  
From October 14 Through October 31, 1986**

**Charles H. Whitlock, Lawrence H. Hoffman,  
and Robert F. Arduini**

**(NASA-TM-101627) ERBE/NOAA-9 OBSERVATIONS  
FOR THE FIRE/SRB WISCONSIN EXPERIMENT REGION  
FROM OCTOBER 14 THROUGH OCTOBER 31, 1986  
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for the FIRE/SRB Wisconsin Experiment Region  
from October 14 Through October 31, 1986

by

Charles H. Whitlock\*, Lawrence H. Hoffman\*, and Robert F. Arduini\*\*

SUMMARY

Tables are presented which show ERBE/NOAA-9 radiances, resolution size, and pixel location for the FIRE/SRB Wisconsin experiment region from October 1 through October 31, 1986. Also presented is an analysis of the ERBE point spread function used to estimate pixel resolution size for the scanner instrument.

INTRODUCTION

A field experiment was conducted in Wisconsin during October 1986 for purposes of both intensive cirrus-cloud measurements and Surface Radiation Budget (SRB) algorithm validation activities. The cirrus-cloud measurements were part of the First ISCCP (International Satellite Cloud Climatology Project) Regional Experiment (FIRE) as described by Starr<sup>1</sup>. The algorithm validation activity was the first experiment of an SRB algorithm intercomparison program based on scientific recommendations from Suttles and Ohring<sup>2</sup>. Both the FIRE and SRB experiments desire data products from the Earth Radiation Budget Experiment (ERBE) instrument on board the NOAA-9 spacecraft. It is the purpose of this document to present that data in the central Wisconsin region from 42.7° to 45.2° North latitude and 269° to 272° East longitude for October 1986.

DATA DESCRIPTION

Table 1 lists scanner data from the ERBE/NOAA-9 system. Column 1 is the day in October of 1986. Columns 2 and 3 are the hours and minutes in GMT time. Columns 4 and 5 are the North latitude and East longitude location of the effective ERBE pixel on the Earth surface. The values given are for the centroid of the ERBE scanner point spread function (PSF). See figures A1 and A2 as well as table A1 in the appendix for a more complete description of ERBE scanner PSF characteristics. Column 6 is the view zenith angle relative to the pixel centroid location on the surface. Columns 7 and 8 give approximate pixel length and width values in kilometers for the instrument response (0.01) which includes 94.1 percent of the total radiance observed by the instrument. Pixel

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size is a function of spacecraft altitude and view zenith angle as well as PSF response. The ERBE scanner nadir-view pixel size is approximately 133x77 km for NOAA-9. (See table A1 and figure A1 in the appendix to estimate pixel dimensions for other radiance criteria.) Columns 9 and 11 are filtered shortwave (SW) and longwave (LW) radiance values ( $W m^{-2} sr^{-1}$ ) as measured by the scanner instrument. Final unfiltered radiances ( $W m^{-2} sr^{-1}$ ) are given in columns 10 and 12 which are the result of spectral corrections<sup>3,4</sup> to obtain true top of atmosphere values.

## APPENDIX

Figure A1 shows ERBE scanner response (known as the point spread function) relative to the instrument optical axis in both the scan and alongtrack directions. The centroid of the point spread function is 2.85° offset from the instrument optical axis in the scan direction because of electronic filtering in combination with a high scan rate to obtain high radiometric accuracy. Figure A2 shows the point spread function in a 3-dimensional view. The footprint is neither round nor rectangular because the instrument aperture was in the shape of a six-sided clipped diamond in order to reduce aliasing both along and normal to the scan direction<sup>5</sup>. The total radiance received by the instrument is represented by the volume of the 3-dimensional point spread function including the tails which spread over a large angular range. Usually, the effective size of a scanner pixel is defined as that which matches a specified response level which contains most of the total radiance seen by the instrument. For ERBE, response levels for various radiance percentages are given in the following table:

Table A1.  
Radiance Percentage for Various Instrument Response Levels

RESPONSE LEVEL	PERCENT OF TOTAL RADIANCE
0.90	19.5
0.80	30.0
0.70	43.7
0.60	50.8
0.50	62.8
0.40	69.5
0.30	77.5
0.20	84.3
0.10	88.9
0.05	92.0
0.02	93.3
0.01	94.1
0.005	95.9
0.002	98.6
0.001	99.5

If one wishes to know the region from which 94.1 percent of the scanner signal originates, the above listing indicates that a

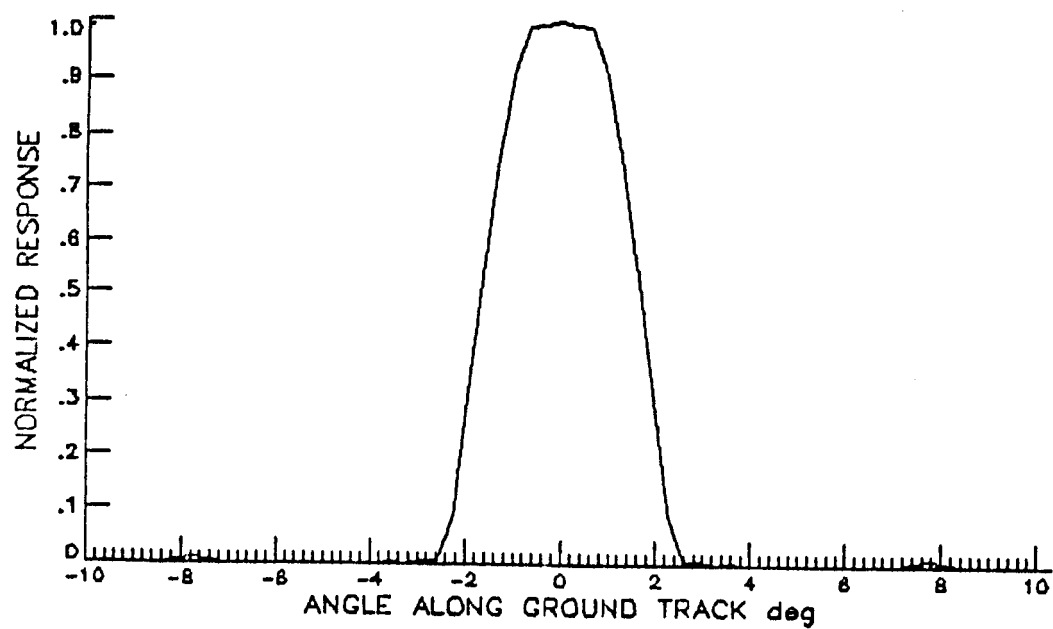
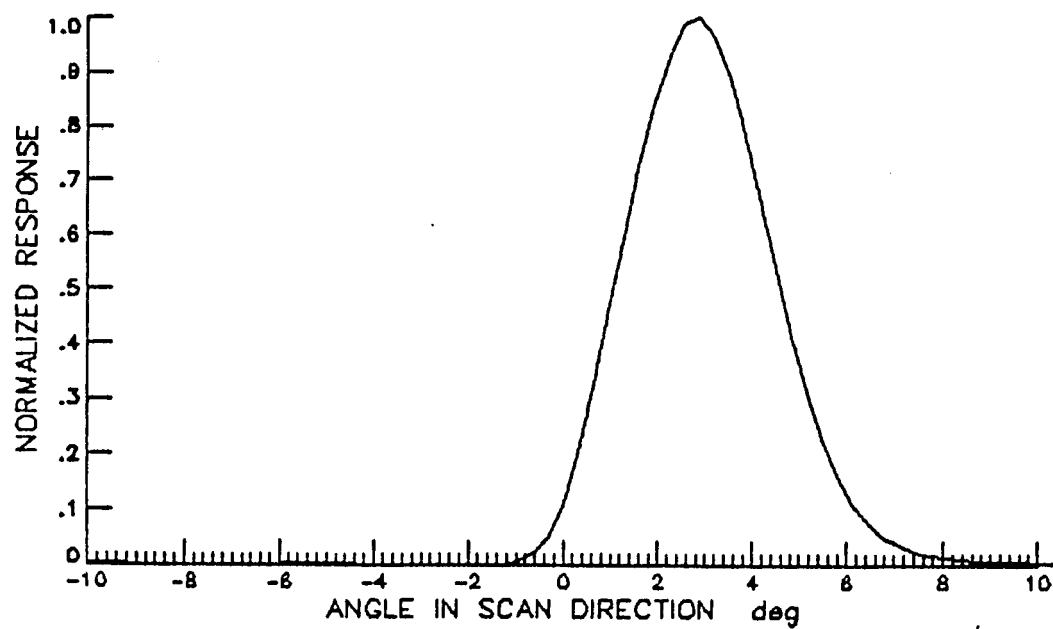


Figure A1. ERBE scanner point spread function.

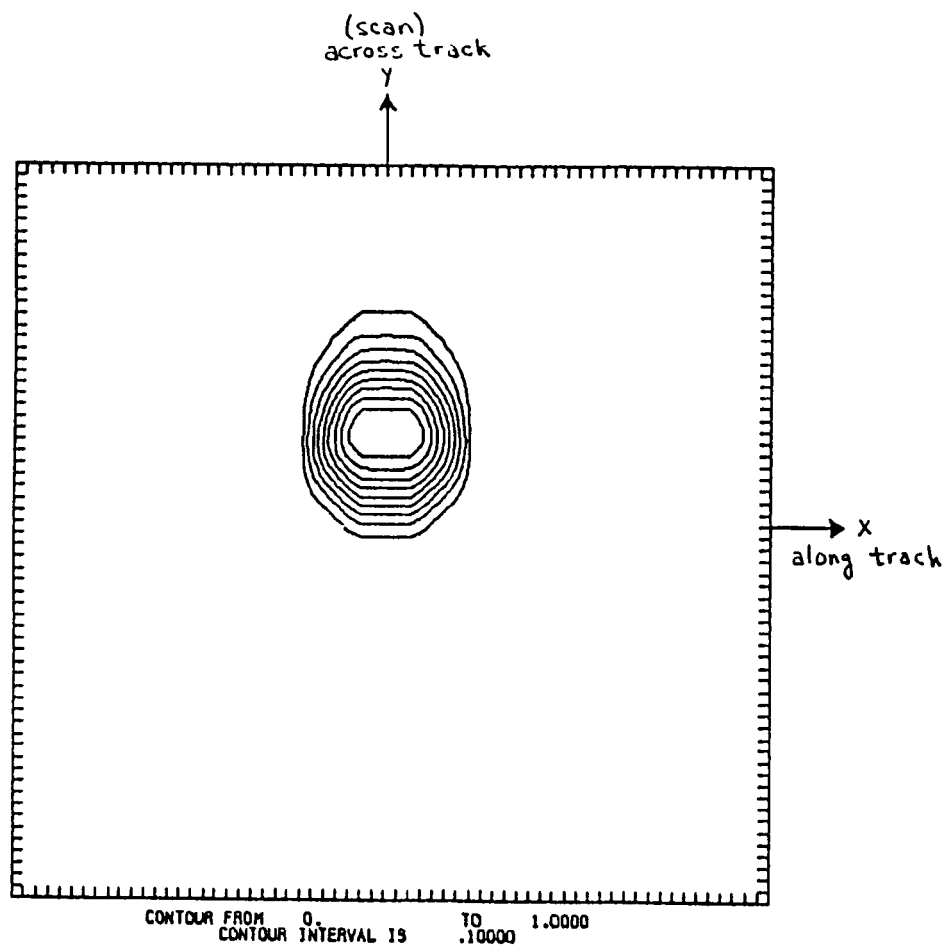
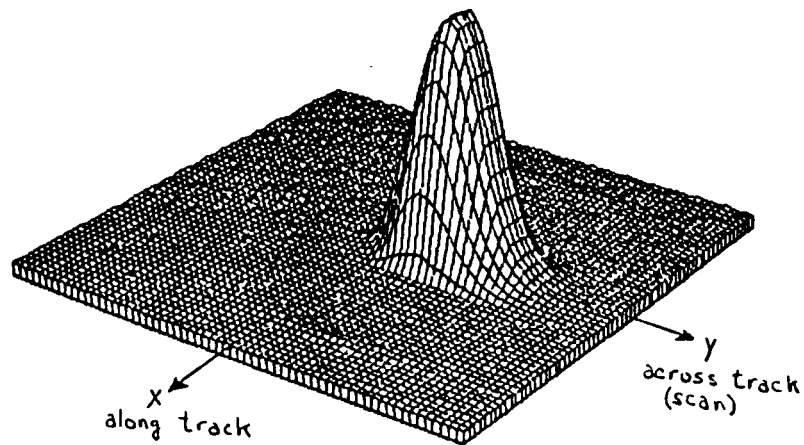


Figure A2. Additional views of ERBE scanner point spread function.

normalized response level of 0.01 is required. Figure A1 indicates that the view angle is approximately from  $-0.7^\circ$  to  $+8.7^\circ$  in the scan direction and  $\pm 2.6^\circ$  in the along track direction. Note from figure A1 that the centroid ( $2.85^\circ$ ) is not in the center of the pixel in the scan direction. If one now considers the NOAA-9 orbit altitude to be 850 km, trigonometry can be used to estimate that the ERBE/NOAA-9 pixel size is approximately  $133 \times 77$  km at the subsatellite point and grows larger as the scan angle increases as shown in the tables. The same procedure can be used to estimate pixel sizes for other radiance percentages and satellite altitudes. For example, it is customary to compare instrument optics in terms of the 50 percent response criteria. For the ERBE/NOAA-9, the 50 percent response criteria corresponds to a  $53 \times 50$  km pixel at the subsatellite point. That size pixel contains only 62.8 percent of the total radiance being received by the instrument, however. Caution is required when defining the surface region being observed by satellite instruments.

#### REFERENCES

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Table 1. ERBE/NOAA-9 Data

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
14	20	8	42.90	271.66	8.99	138	79	49.28	84.68	37.09	66.60
14	20	8	42.83	271.24	11.52	139	79	54.71	94.06	37.06	66.27
14	20	8	42.76	270.82	14.05	140	79	59.51	102.35	36.59	65.33
14	20	8	43.14	271.60	8.82	138	79	56.83	97.71	36.71	65.54
14	20	8	43.07	271.18	11.35	139	79	54.91	94.41	37.03	65.87
14	20	8	42.99	270.76	13.88	140	79	55.57	95.53	36.83	65.79
14	20	8	42.91	270.33	16.41	142	79	59.44	102.23	36.52	65.19
14	20	8	42.83	269.89	18.96	144	79	55.51	95.43	37.46	66.48
14	20	8	42.75	269.44	21.51	146	79	46.07	79.14	38.37	68.50
14	20	8	43.43	271.92	6.27	137	79	64.25	110.53	36.07	64.14
14	20	8	43.37	271.51	8.79	138	79	59.80	102.84	36.96	65.75
14	20	8	43.29	271.09	11.32	139	79	59.43	102.20	36.85	65.64
14	20	8	43.22	270.67	13.85	140	79	60.67	104.35	36.81	65.31
14	20	8	43.14	270.24	16.38	142	79	61.23	105.32	36.68	64.99
14	20	8	43.06	269.80	18.93	144	79	58.13	99.96	37.10	65.91
14	20	8	42.98	269.35	21.48	146	79	47.03	80.80	38.36	68.16
14	20	8	43.66	271.82	6.36	137	79	60.66	104.32	36.34	65.87
14	20	8	43.59	271.40	8.88	138	79	63.31	108.89	36.36	65.93
14	20	8	43.52	270.98	11.40	139	79	65.65	112.93	36.42	65.62
14	20	8	43.45	270.56	13.93	140	79	67.00	115.26	36.30	65.69
14	20	8	43.37	270.13	16.44	142	79	66.95	115.18	36.16	65.10
14	20	8	43.29	269.69	18.99	144	79	62.88	108.16	36.67	66.03
14	20	8	43.20	269.24	21.54	146	79	49.99	85.91	38.10	68.69
14	20	8	43.89	271.74	6.30	137	79	60.62	104.26	36.04	65.52
14	20	8	43.82	271.32	8.82	138	79	66.38	114.19	35.70	64.68
14	20	8	43.75	270.90	11.35	139	79	68.38	117.66	36.29	65.16
14	20	8	43.68	270.47	13.88	140	79	68.46	117.79	36.34	65.14
14	20	8	43.60	270.04	16.41	142	79	67.13	115.50	36.21	65.18
14	20	8	43.52	269.60	18.96	144	79	58.12	99.93	36.98	66.24
14	20	8	43.43	269.14	21.51	146	79	45.14	77.53	38.33	69.02
14	20	8	44.12	271.65	6.27	137	79	61.04	104.98	36.16	64.57
14	20	8	44.05	271.23	8.79	138	79	63.82	109.78	36.09	64.28
14	20	8	43.98	270.81	11.32	139	79	65.69	113.02	36.41	64.94
14	20	8	43.90	270.38	13.85	140	79	69.54	119.67	36.72	65.27
14	20	8	43.83	269.95	16.38	142	79	65.84	113.27	37.02	65.60
14	20	8	43.74	269.50	18.93	144	79	50.29	86.43	38.05	67.67
14	20	8	43.66	269.05	21.48	146	79	34.09	58.46	40.01	71.45
14	20	9	44.41	271.94	3.96	136	79	*****	*****	*****	*****
14	20	9	44.34	271.52	6.47	137	79	*****	*****	*****	*****
14	20	9	44.27	271.10	8.99	138	79	*****	*****	*****	*****
14	20	9	44.20	270.68	11.52	139	79	*****	*****	*****	*****
14	20	9	44.13	270.25	14.05	140	79	*****	*****	*****	*****
14	20	9	44.05	269.82	16.56	142	79	*****	*****	*****	*****
14	20	9	43.96	269.37	19.10	144	79	*****	*****	*****	*****
14	20	9	44.64	271.87	3.81	136	79	51.66	93.96	35.53	64.28
14	20	9	44.58	271.46	6.30	137	79	55.71	95.77	35.73	64.41
14	20	9	44.51	271.04	8.82	138	79	59.08	101.59	35.57	64.04
14	20	9	44.43	270.61	11.35	139	79	63.80	109.74	36.15	65.05
14	20	9	44.36	270.18	13.88	140	79	67.30	115.79	36.64	65.31
14	20	9	44.28	269.75	16.41	142	79	55.06	94.66	36.94	66.04
14	20	9	44.20	269.30	18.96	144	79	38.21	65.56	38.41	68.94
14	20	9	44.88	271.81	3.65	136	79	48.91	84.04	35.21	64.23
14	20	9	44.81	271.39	6.16	137	79	50.06	86.02	35.32	64.40
14	20	9	44.74	270.97	8.68	138	79	53.18	91.41	35.34	64.55
14	20	9	44.67	270.54	11.21	139	79	61.21	105.27	36.00	65.46



Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
14	20	9	44.59	270.11	13.74	140	79	64.81	111.49	36.40	65.76
14	20	9	44.51	269.67	16.27	142	79	53.74	92.38	36.79	66.55
14	20	9	44.43	269.22	18.81	144	79	37.23	63.87	38.43	69.51
14	20	9	45.10	271.66	3.96	136	79	47.02	80.76	33.95	62.96
14	20	9	45.03	271.24	6.47	137	79	46.07	79.12	34.50	63.78
14	20	9	44.96	270.82	8.99	138	79	49.09	84.34	35.31	65.13
14	20	9	44.88	270.39	11.52	139	79	59.51	102.34	35.63	65.38
14	20	9	44.81	269.96	14.05	140	79	62.67	107.79	35.86	65.20
14	20	9	44.73	269.52	16.56	142	79	49.14	84.44	36.94	66.96
14	20	9	44.64	269.07	19.10	144	79	30.41	52.08	39.02	71.25
14	20	9	45.19	270.75	8.82	138	79	51.66	88.79	36.34	65.23
14	20	9	45.12	270.32	11.35	139	79	59.23	101.86	36.31	64.61
14	20	9	45.04	269.89	13.88	140	79	62.49	107.49	36.19	64.11
14	20	9	44.96	269.44	16.41	142	79	52.26	89.84	37.44	66.29
14	20	9	45.19	269.37	16.27	142	79	48.49	83.32	37.35	66.49
15	19	57	42.75	271.72	23.87	149	79	*****			
15	19	57	42.96	271.56	24.19	149	79	18.27	31.43	47.37	84.14
15	19	57	42.86	271.08	26.77	152	79	17.83	30.68	47.51	84.34
15	19	57	42.76	270.58	29.36	156	79	18.53	31.53	47.82	84.79
15	19	57	43.28	271.96	21.45	146	79	18.80	32.35	47.43	84.36
15	19	57	43.19	271.49	24.01	149	79	19.38	33.36	47.00	83.36
15	19	57	43.10	271.01	26.59	152	79	18.94	32.60	47.14	83.73
15	19	57	43.00	270.51	29.18	156	79	19.29	32.82	47.46	84.12
15	19	57	42.89	269.98	31.79	160	79	19.27	32.86	47.84	84.74
15	19	57	42.77	269.43	34.42	165	79	19.65	33.52	47.79	84.49
15	19	57	43.52	271.89	21.31	146	79	19.58	33.70	46.97	83.45
15	19	57	43.43	271.42	23.87	149	79	20.76	35.74	46.28	82.37
15	19	57	43.33	270.93	26.45	152	79	20.44	35.19	46.42	82.59
15	19	57	43.23	270.43	29.04	156	79	20.20	34.77	46.74	82.65
15	19	57	43.12	269.90	31.65	160	79	19.35	33.00	47.20	83.51
15	19	57	43.00	269.35	34.27	165	79	19.86	33.87	47.06	83.10
15	19	58	43.73	271.73	21.62	146	79	21.54	37.08	46.55	82.58
15	19	58	43.64	271.26	24.19	149	79	22.60	38.91	45.68	81.30
15	19	58	43.54	270.77	26.77	152	79	22.52	38.77	45.65	80.85
15	19	58	43.44	270.26	29.36	156	79	22.51	38.76	45.70	81.13
15	19	58	43.33	269.74	31.94	160	79	21.78	37.16	45.99	81.65
15	19	58	43.21	269.18	34.57	165	79	21.69	37.01	45.77	81.31
15	19	58	43.97	271.68	21.34	146	79	23.79	40.96	45.60	81.14
15	19	58	43.88	271.21	23.90	149	79	26.62	45.87	44.30	78.93
15	19	58	43.78	270.72	26.48	152	79	29.51	50.85	43.39	77.41
15	19	58	43.68	270.21	29.07	156	79	30.09	51.86	43.27	77.08
15	19	58	43.57	269.68	31.68	160	79	23.76	46.15	44.17	78.34
15	19	58	43.45	269.13	34.31	165	79	23.94	40.86	44.82	79.69
15	19	58	44.27	271.98	19.10	144	79	23.87	51.48	44.03	78.61
15	19	58	44.18	271.52	21.65	146	79	30.40	52.39	43.68	77.57
15	19	58	44.09	271.04	24.22	149	79	35.49	61.18	42.03	74.70
15	19	58	43.99	270.55	26.80	152	79	39.80	68.62	40.77	72.36
15	19	58	43.89	270.04	29.39	156	79	37.42	64.51	41.27	73.10
15	19	58	43.78	269.51	32.00	160	79	29.69	51.23	43.39	77.01
15	19	58	44.50	271.88	19.07	144	79	38.60	66.54	41.91	74.73
15	19	58	44.41	271.42	21.63	146	79	37.58	64.78	41.74	74.53
15	19	58	44.32	270.94	24.19	149	79	41.37	71.33	40.18	71.78
15	19	58	44.22	270.45	26.77	152	79	45.55	78.55	39.62	71.03
15	19	58	44.11	269.94	29.36	156	79	44.83	77.31	40.64	72.44
15	19	58	44.00	269.41	31.94	160	79	37.70	64.96	43.02	76.41

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
15	19	58	44.73	271.81	18.93	144	79	*****			
15	19	58	44.64	271.35	21.45	146	79	*****			
15	19	58	44.55	270.87	24.02	149	79	*****			
15	19	58	44.45	270.38	26.59	152	79	*****			
15	19	58	44.35	269.86	29.18	156	79	*****			
15	19	58	44.23	269.33	31.79	160	79	*****			
15	19	58	44.95	271.67	19.10	144	79	43.28	74.63	40.71	72.68
15	19	58	44.86	271.21	21.65	146	79	45.47	78.40	40.54	72.17
15	19	58	44.77	270.73	24.22	149	79	46.29	79.82	40.19	71.75
15	19	58	44.67	270.23	26.80	152	79	54.15	93.39	40.07	71.32
15	19	58	44.56	269.71	29.39	156	79	60.18	103.81	40.39	71.64
15	19	58	44.45	269.17	32.00	160	79	56.85	98.01	41.37	72.90
15	19	58	45.18	271.59	18.96	144	79	36.62	63.13	40.96	73.27
15	19	58	45.09	271.13	21.51	146	79	48.05	82.86	40.44	71.96
15	19	58	45.00	270.65	24.08	149	79	51.00	87.96	40.09	71.39
15	19	58	44.90	270.15	26.65	152	79	57.08	98.46	40.06	71.35
15	19	58	44.79	269.63	29.24	156	79	62.64	108.06	40.29	71.40
15	19	58	44.68	269.10	31.82	160	79	62.27	107.37	41.01	72.49
15	19	58	45.13	270.05	26.59	152	79	57.07	98.43	40.00	71.89
15	19	58	45.02	269.53	29.19	156	79	62.02	106.98	40.14	72.22
16	9	59	45.04	271.78	42.62	181	77	-1.16	.00	39.67	72.82
16	9	59	45.15	270.29	36.96	167	77	-.45	.00	42.28	76.86
16	9	59	45.00	270.91	39.60	173	77	-.47	.00	40.49	74.14
16	9	59	44.84	271.58	42.31	181	77	-.46	.00	38.51	71.17
16	9	59	45.17	269.10	32.10	158	77	-.39	.00	42.03	76.17
16	9	59	45.04	269.67	34.73	162	77	-.38	.00	41.63	75.86
16	9	59	44.91	270.26	37.38	168	77	-.40	.00	40.85	74.78
16	9	59	44.76	270.89	40.05	174	77	-.45	.00	38.71	71.35
16	9	59	44.59	271.57	42.77	182	77	-.46	.00	36.73	68.20
16	9	59	44.82	269.54	34.70	162	77	-.49	.00	39.74	72.90
16	9	59	44.68	270.14	37.35	168	77	-.49	.00	38.70	71.29
16	9	59	44.53	270.76	40.02	174	77	-.51	.00	36.91	68.40
16	9	59	44.37	271.44	42.74	182	77	-.50	.00	34.84	65.08
16	9	59	44.60	269.40	34.55	162	77	.17	.00	39.52	72.88
16	9	59	44.47	269.98	37.20	168	77	.28	.00	38.74	71.62
16	9	59	44.32	270.60	39.84	174	77	.25	.00	37.39	69.63
16	9	59	44.16	271.27	42.55	181	77	.25	.00	35.59	66.66
16	9	59	44.39	269.24	34.37	162	77	.29	.00	39.79	72.88
16	9	59	44.25	269.83	37.02	167	77	.27	.00	39.27	71.98
16	9	59	44.11	270.45	39.69	174	77	.12	.00	38.01	69.99
16	9	59	43.95	271.11	42.40	181	77	.24	.00	36.55	67.55
16	10	0	44.15	269.20	34.69	162	77	*****			
16	10	0	44.01	269.78	37.34	168	77	*****			
16	10	0	43.87	270.41	40.02	174	77	*****			
16	10	0	43.70	271.07	42.73	182	77	*****			
16	10	0	43.93	269.05	34.55	162	77	.44	.00	40.24	73.51
16	10	0	43.80	269.63	37.19	168	77	.31	.00	38.85	71.53
16	10	0	43.65	270.25	39.84	174	77	.40	.00	37.24	69.18
16	10	0	43.49	270.91	42.55	181	77	.40	.00	36.39	67.47
16	10	0	43.58	269.48	37.01	167	77	.28	.00	38.55	70.75
16	10	0	43.44	270.09	39.69	174	77	.25	.00	37.29	68.76
16	10	0	43.28	270.75	42.39	181	77	.25	.00	36.18	66.86
16	10	0	43.34	269.44	37.34	168	77	.25	.00	37.91	69.76
16	10	0	43.19	270.06	40.02	174	77	.22	.00	36.82	68.13
16	10	0	43.04	270.72	42.73	182	77	.22	.00	35.28	65.51

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
16	10	0	43.12	269.29	37.19	168	77	.26	.00	38.28	70.10
16	10	0	42.98	269.90	39.84	174	77	.34	.00	37.10	68.47
16	10	0	42.82	270.55	42.55	181	77	.35	.00	35.56	65.85
16	10	0	42.89	269.22	37.37	168	77	.27	.00	38.89	71.19
16	10	0	42.75	269.83	40.05	174	77	.24	.00	37.63	69.20
16	19	47	42.71	271.49	37.34	171	79	54.38	93.28	45.47	79.52
16	19	47	43.06	271.97	34.66	165	79	*****			
16	19	47	42.93	271.39	37.31	171	79	*****			
16	19	47	42.79	270.76	40.00	178	79	*****			
16	19	47	43.29	271.90	34.51	165	79	72.81	125.40	42.82	75.34
16	19	47	43.16	271.31	37.16	171	79	67.94	116.63	43.96	77.02
16	19	47	43.02	270.69	39.82	177	79	46.22	79.24	46.18	80.92
16	19	47	42.86	270.02	42.54	185	79	27.27	46.39	48.29	84.92
16	19	47	43.50	271.72	34.81	166	79	72.89	125.53	42.72	75.23
16	19	47	43.37	271.13	37.47	171	79	66.95	114.93	43.77	76.90
16	19	47	43.23	270.49	40.15	178	79	49.02	84.06	45.73	80.25
16	19	47	43.07	269.82	42.87	186	79	28.41	48.34	48.19	84.66
16	19	47	43.73	271.64	34.66	165	79	72.24	124.41	42.73	75.16
16	19	47	43.60	271.05	37.32	171	79	65.95	113.21	43.61	76.77
16	19	47	43.46	270.42	40.00	178	79	53.71	92.13	44.95	79.01
16	19	47	43.30	269.74	42.72	185	79	31.67	53.93	47.60	84.06
16	19	47	43.96	271.54	34.63	165	79	71.62	123.33	43.10	76.47
16	19	47	43.83	270.94	37.29	171	79	65.07	112.03	43.63	77.45
16	19	47	43.68	270.31	39.94	177	79	55.78	95.70	44.80	79.24
16	19	47	43.52	269.64	42.66	185	79	34.20	58.27	47.36	84.21
16	19	47	44.30	271.95	32.18	161	79	73.74	126.99	42.52	75.66
16	19	47	44.17	271.38	34.81	166	79	72.24	124.40	42.55	76.12
16	19	47	44.04	270.78	37.47	171	79	67.03	115.41	43.17	76.95
16	19	47	43.89	270.15	40.15	178	79	57.76	99.11	44.09	78.53
16	19	47	43.73	269.46	42.88	186	79	36.57	62.32	46.64	83.00
16	19	47	44.53	271.87	32.03	160	79	73.97	127.39	42.79	75.23
16	19	47	44.41	271.30	34.66	165	79	74.47	128.25	42.83	75.55
16	19	47	44.27	270.70	37.32	171	79	71.49	123.11	43.36	76.09
16	19	47	44.12	270.06	40.00	177	79	62.80	107.79	44.01	77.45
16	19	47	43.96	269.38	42.72	185	79	42.31	72.14	46.30	81.73
16	19	47	44.75	271.76	32.00	160	79	73.69	126.92	42.77	75.16
16	19	47	44.63	271.19	34.63	165	79	75.62	130.24	42.81	75.38
16	19	47	44.50	270.59	37.29	171	79	73.83	127.15	43.25	75.96
16	19	47	44.35	269.96	39.94	177	79	64.20	110.53	43.90	77.08
16	19	47	44.19	269.28	42.66	185	79	45.60	77.78	45.93	81.06
16	19	47	44.99	271.71	31.71	160	79	*****			
16	19	47	44.87	271.14	34.33	165	79	*****			
16	19	47	44.73	270.54	36.99	170	79	*****			
16	19	47	44.59	269.91	39.67	177	79	*****			
16	19	47	44.43	269.23	42.38	184	79	*****			
16	19	47	45.20	271.50	32.15	161	79	73.12	125.93	42.43	74.82
16	19	47	45.07	270.93	34.78	165	79	76.35	131.51	42.64	74.92
16	19	47	44.93	270.32	37.44	171	79	76.81	132.30	43.09	75.74
16	19	47	44.78	269.67	40.13	178	79	68.13	117.31	43.83	76.68
16	19	47	45.16	270.24	37.29	171	79	77.02	132.66	42.99	75.43
16	19	47	45.02	269.60	39.94	177	79	70.47	121.35	43.55	76.40
17	9	48	45.20	271.23	29.32	153	77	-1.25	.00	40.38	74.27
17	9	48	45.08	271.76	31.92	157	77	-1.26	.00	40.43	74.44
17	9	48	45.18	270.15	24.36	147	77	-.60	.00	41.07	75.57
17	9	48	45.07	270.64	26.94	150	77	-.56	.00	40.63	74.95

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
17	9	48	44.97	271.15	29.49	153	77	-.55	.00	40.58	74.71
17	9	48	44.85	271.68	32.10	158	77	-.56	.00	40.72	74.89
17	9	48	45.14	269.09	19.11	141	77	.20	.00	42.90	78.33
17	9	48	45.05	269.54	21.63	144	77	.25	.00	42.70	77.82
17	9	48	44.96	270.01	24.19	146	77	.24	.00	41.88	76.46
17	9	48	44.86	270.50	26.76	149	77	.16	.00	41.44	75.84
17	9	48	44.75	271.01	29.35	153	77	.26	.00	41.31	75.59
17	9	48	44.63	271.54	31.95	157	77	.25	.00	41.53	75.94
17	9	49	44.83	269.41	21.49	143	77	.15	.00	42.84	78.52
17	9	49	44.74	269.88	24.05	146	77	.15	.00	42.02	77.14
17	9	49	44.63	270.36	26.62	149	77	.18	.00	41.49	76.34
17	9	49	44.53	270.87	29.20	153	77	.17	.00	41.36	75.91
17	9	49	44.41	271.39	31.80	157	77	.16	.00	41.67	76.44
17	9	49	44.29	271.95	34.43	162	77	.19	.00	41.56	76.24
17	9	49	44.61	269.28	21.35	143	77	.16	.00	43.09	78.72
17	9	49	44.51	269.75	23.90	146	77	.15	.00	42.27	77.16
17	9	49	44.41	270.23	26.47	149	77	.19	.00	41.74	76.36
17	9	49	44.31	270.73	29.06	153	77	.18	.00	41.53	75.94
17	9	49	44.20	271.24	31.63	157	77	.16	.00	41.83	76.47
17	9	49	44.07	271.79	34.25	161	77	.19	.00	41.91	76.44
17	9	49	44.37	269.25	21.75	144	77	-.30	.00	43.42	78.76
17	9	49	44.27	269.71	24.30	146	77	-.32	.00	42.51	77.19
17	9	49	44.17	270.20	26.88	150	77	-.30	.00	41.98	76.57
17	9	49	44.06	270.70	29.46	153	77	-.33	.00	41.68	75.96
17	9	49	43.95	271.22	32.07	158	77	-.36	.00	42.07	76.49
17	9	49	43.83	271.78	34.69	162	77	-.46	.00	42.05	76.46
17	9	49	44.15	269.10	21.49	143	77	-.64	.00	43.27	79.02
17	9	49	44.05	269.56	24.04	146	77	-.63	.00	42.36	77.46
17	9	49	43.96	270.04	26.62	149	77	-.59	.00	41.75	76.49
17	9	49	43.85	270.54	29.20	153	77	-.58	.00	41.36	75.71
17	9	49	43.74	271.06	31.80	157	77	-.59	.00	41.75	76.24
17	9	49	43.61	271.61	34.42	162	77	-.54	.00	41.82	76.57
17	9	49	43.91	269.05	21.80	144	77	*****			
17	9	49	43.82	269.51	24.36	147	77	*****			
17	9	49	43.72	269.99	26.93	150	77	*****			
17	9	49	43.61	270.49	29.49	153	77	*****			
17	9	49	43.50	271.01	32.10	158	77	*****			
17	9	49	43.38	271.56	34.72	162	77	*****			
17	9	49	43.59	269.40	24.30	146	77	.36	.00	43.14	78.86
17	9	49	43.49	269.88	26.87	150	77	.39	.00	42.70	78.06
17	9	49	43.39	270.38	29.46	153	77	.38	.00	42.39	77.64
17	9	49	43.27	270.89	32.07	158	77	.37	.00	42.70	77.99
17	9	49	43.15	271.44	34.69	162	77	.28	.00	42.69	78.14
17	9	49	43.37	269.27	24.16	146	77	-.46	.00	43.60	79.78
17	9	49	43.27	269.75	26.73	149	77	-.44	.00	42.98	78.80
17	9	49	43.17	270.24	29.32	153	77	-.47	.00	42.68	78.20
17	9	49	43.05	270.76	31.92	157	77	-.50	.00	42.81	78.36
17	9	49	42.93	271.30	34.54	162	77	-.48	.00	42.79	78.51
17	9	49	42.80	271.87	37.19	168	77	-.51	.00	42.33	77.55
17	9	49	43.13	269.21	24.36	147	77	-1.27	.00	43.48	79.59
17	9	49	43.04	269.68	26.93	150	77	-1.12	.00	42.86	78.78
17	9	49	42.93	270.17	29.52	153	77	-1.13	.00	42.47	78.18
17	9	49	42.82	270.69	32.09	158	77	-1.15	.00	42.43	77.99
17	9	49	42.91	269.07	24.19	146	77	-1.25	.00	43.91	80.08
17	9	49	42.82	269.54	26.76	150	77	-1.22	.00	43.46	79.46

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
17	9	49	42.71	270.04	29.34	153	77	-1.23	.00	43.16	78.86
17	19	36	44.27	271.96	42.72	185	79	55.36	95.34	43.25	75.95
17	19	36	44.49	271.85	42.66	185	79	47.32	81.47	43.59	77.31
17	19	36	44.72	271.77	42.50	184	79	38.34	65.97	44.11	78.54
17	19	36	44.93	271.59	42.72	185	79	28.92	49.79	45.00	80.28
17	19	37	45.16	271.51	42.54	184	79	*****			
18	9	38	45.14	271.29	16.26	139	77	*****			
18	9	38	45.05	271.73	18.80	141	77	*****			
18	9	38	45.14	269.98	9.11	135	77	.35	.00	43.72	80.21
18	9	38	45.06	270.40	11.63	136	77	.33	.00	43.75	80.26
18	9	38	44.98	270.83	14.16	138	77	.40	.00	43.79	80.33
18	9	38	44.90	271.26	16.69	139	77	.48	.00	43.99	80.41
18	9	38	44.81	271.70	19.23	141	77	.34	.00	44.49	81.21
18	9	38	45.06	269.04	3.95	134	77	.35	.00	43.96	80.60
18	9	38	44.99	269.45	6.46	134	77	.34	.00	44.27	80.92
18	9	38	44.91	269.86	8.97	135	77	.40	.00	44.08	80.90
18	9	38	44.84	270.28	11.49	136	77	.38	.00	44.20	80.95
18	9	38	44.76	270.70	13.99	138	77	.33	.00	44.24	80.84
18	9	38	44.68	271.13	16.52	139	77	.29	.00	44.44	81.10
18	9	38	44.59	271.57	19.05	141	77	.27	.00	44.77	81.36
18	9	38	44.76	269.33	6.29	134	77	.29	.00	44.30	81.30
18	9	38	44.69	269.74	8.80	135	77	.24	.00	44.28	81.29
18	9	38	44.61	270.15	11.32	136	77	.22	.00	44.31	81.34
18	9	38	44.53	270.57	13.84	137	77	.29	.00	44.35	81.23
18	9	38	44.45	271.00	16.37	139	77	.37	.00	44.47	81.31
18	9	38	44.37	271.44	18.91	141	77	.34	.00	44.62	81.58
18	9	38	44.28	271.89	21.46	143	77	.28	.00	44.89	81.81
18	9	38	44.53	269.26	6.49	134	77	.44	.00	44.34	81.20
18	9	38	44.45	269.67	9.00	135	77	.39	.00	44.32	81.18
18	9	38	44.38	270.09	11.52	136	77	.37	.00	44.27	81.23
18	9	38	44.30	270.51	14.04	138	77	.32	.00	44.40	81.31
18	9	38	44.22	270.94	16.57	139	77	.40	.00	44.60	81.56
18	9	38	44.13	271.38	19.11	141	77	.38	.00	45.01	82.19
18	9	38	44.04	271.83	21.66	144	77	.31	.00	45.19	82.42
18	9	38	44.30	269.17	6.46	134	77	.24	.00	44.63	81.58
18	9	38	44.22	269.58	8.97	135	77	.30	.00	44.79	81.56
18	9	38	44.15	269.99	11.49	136	77	.28	.00	44.91	81.79
18	9	38	44.07	270.40	13.99	138	77	.23	.00	44.69	81.50
18	9	38	43.99	270.83	16.52	139	77	.31	.00	45.07	81.94
18	9	38	43.91	271.27	19.05	141	77	.28	.00	45.65	82.74
18	9	38	43.82	271.71	21.60	144	77	.21	.00	45.83	82.97
18	9	38	44.07	269.05	6.29	134	77	.31	.00	46.59	81.87
18	9	38	44.00	269.45	8.80	135	77	.25	.00	46.62	81.85
18	9	38	43.93	269.86	11.32	136	77	.24	.00	46.78	82.08
18	9	38	43.85	270.28	13.84	137	77	.19	.00	46.79	81.79
18	9	38	43.77	270.71	16.37	139	77	.27	.00	46.94	82.05
18	9	38	43.68	271.14	18.91	141	77	.24	.00	47.31	82.50
18	9	38	43.60	271.59	21.46	143	77	.18	.00	47.63	82.91
18	9	38	43.77	269.39	9.00	135	77	.20	.00	45.00	81.79
18	9	38	43.69	269.80	11.52	136	77	.19	.00	45.11	82.02
18	9	38	43.61	270.22	14.04	138	77	.13	.00	45.16	82.09
18	9	38	43.53	270.64	16.57	139	77	.22	.00	45.27	82.17
18	9	38	43.45	271.08	19.11	141	77	.19	.00	45.51	82.44
18	9	38	43.36	271.52	21.66	144	77	.13	.00	45.78	82.85
18	9	38	43.27	271.97	24.19	146	77	.24	.00	45.47	82.34

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
18	9	38	43.54	269.28	8.86	135	77	*****	*****	*****	*****
18	9	38	43.47	269.69	11.38	136	77	*****	*****	*****	*****
18	9	38	43.39	270.09	13.87	137	77	*****	*****	*****	*****
18	9	38	43.31	270.52	16.40	139	77	*****	*****	*****	*****
18	9	38	43.23	270.95	18.94	141	77	*****	*****	*****	*****
18	9	38	43.14	271.39	21.48	143	77	*****	*****	*****	*****
18	9	38	43.05	271.84	24.04	146	77	*****	*****	*****	*****
18	9	38	43.31	269.18	8.80	135	77	.36	.00	44.86	82.09
18	9	38	43.24	269.58	11.32	136	77	.35	.00	45.07	82.32
18	9	38	43.16	269.99	13.84	137	77	.30	.00	45.29	82.40
18	9	38	43.08	270.41	16.37	139	77	.26	.00	45.31	82.48
18	9	38	43.00	270.84	18.91	141	77	.24	.00	45.46	82.75
18	9	38	42.91	271.28	21.46	143	77	.29	.00	45.64	82.80
18	9	38	42.82	271.74	24.01	146	77	.28	.00	45.08	81.93
18	9	38	43.09	269.06	8.66	135	77	-.31	.00	45.00	82.27
18	9	38	43.01	269.47	11.18	136	77	-.34	.00	45.12	82.14
18	9	38	42.94	269.88	13.70	137	77	-.29	.00	45.25	82.21
18	9	38	42.86	270.29	16.23	139	77	-.34	.00	45.27	82.47
18	9	38	42.77	270.72	18.77	141	77	-.38	.00	45.33	82.55
18	9	38	42.85	269.02	8.97	135	77	-.71	.00	44.56	81.30
18	9	38	42.77	269.42	11.49	136	77	-.72	.00	44.68	81.36
19	9	27	45.19	271.81	3.81	134	77	.18	.00	44.20	80.85
19	9	27	45.16	270.53	3.51	134	77	.25	.00	44.01	80.65
19	9	27	45.09	270.94	1.07	133	77	.14	.00	44.02	80.40
19	9	27	45.03	271.34	1.47	133	77	.23	.00	44.26	80.57
19	9	27	44.96	271.74	3.98	134	77	.26	.00	44.56	81.12
19	9	27	45.12	269.17	11.20	136	77	*****	*****	*****	*****
19	9	27	45.06	269.58	8.71	135	77	*****	*****	*****	*****
19	9	27	45.00	270.00	6.19	134	77	*****	*****	*****	*****
19	9	27	44.93	270.41	3.68	134	77	*****	*****	*****	*****
19	9	27	44.86	270.83	1.21	133	77	*****	*****	*****	*****
19	9	27	44.80	271.22	1.33	133	77	*****	*****	*****	*****
19	9	27	44.73	271.63	3.83	134	77	*****	*****	*****	*****
19	9	27	44.89	269.13	10.94	136	77	.29	.00	44.12	81.25
19	9	27	44.82	269.55	8.42	135	77	.24	.00	44.07	80.88
19	9	27	44.76	269.96	5.91	134	77	.31	.00	44.01	80.80
19	9	27	44.69	270.37	3.40	134	77	.23	.00	44.07	80.85
19	9	27	44.63	270.79	.91	133	77	.23	.00	44.08	80.78
19	9	27	44.56	271.18	1.64	133	77	.21	.00	44.32	81.13
19	9	27	44.49	271.59	4.14	134	77	.23	.00	44.54	81.32
19	9	27	44.42	271.99	6.63	134	77	.22	.00	45.02	82.06
19	9	27	44.65	269.04	10.94	136	77	.38	.00	44.39	81.43
19	9	27	44.59	269.46	8.42	135	77	.33	.00	44.34	81.41
19	9	27	44.53	269.87	5.91	134	77	.40	.00	44.37	81.16
19	9	27	44.46	270.28	3.40	134	77	.32	.00	44.43	81.39
19	9	27	44.40	270.69	.96	133	77	.20	.00	44.44	81.32
19	9	27	44.33	271.08	1.58	133	77	.30	.00	44.68	81.67
19	9	27	44.26	271.49	4.09	134	77	.32	.00	45.07	82.21
19	9	27	44.19	271.89	6.60	134	77	.31	.00	45.29	82.60
19	9	27	44.36	269.35	8.59	135	77	.23	.00	44.31	81.59
19	9	27	44.30	269.76	6.08	134	77	.30	.00	44.34	81.52
19	9	27	44.24	270.17	3.57	134	77	.22	.00	44.48	81.39
19	9	27	44.17	270.58	1.10	133	77	.22	.00	44.41	81.33
19	9	27	44.11	270.97	1.45	133	77	.20	.00	44.74	81.85
19	9	27	44.04	271.37	3.95	134	77	.10	.00	45.30	82.75

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
19	9	27	43.97	271.78	6.46	134	77	.09	.00	45.61	83.32
19	9	27	44.14	269.25	8.73	135	77	.26	.00	44.70	81.92
19	9	27	44.07	269.66	6.22	134	77	.22	.00	44.55	81.49
19	9	27	44.01	270.06	3.71	134	77	.25	.00	44.61	81.72
19	9	27	43.94	270.47	1.24	133	77	.25	.00	44.53	81.48
19	9	27	43.88	270.86	1.31	133	77	.11	.00	44.78	81.82
19	9	27	43.81	271.26	3.80	134	77	.13	.00	45.17	82.37
19	9	27	43.74	271.66	6.29	134	77	.12	.00	45.39	82.58
19	9	27	43.90	269.21	8.42	135	77	-.08	.00	44.97	82.20
19	9	27	43.83	269.62	5.91	134	77	-.02	.00	44.82	81.94
19	9	27	43.77	270.03	3.40	134	77	-.12	.00	44.79	81.81
19	9	27	43.71	270.43	.96	133	77	-.24	.00	44.80	81.74
19	9	27	43.64	270.82	1.58	133	77	-.16	.00	44.86	81.90
19	9	27	43.57	271.22	4.09	134	77	-.27	.00	44.90	81.90
19	9	27	43.50	271.62	6.60	134	77	-.30	.00	45.21	82.29
19	9	27	43.67	269.08	8.74	135	77	-.86	.00	44.45	81.63
19	9	27	43.61	269.49	6.22	134	77	-.78	.00	44.30	81.37
19	9	27	43.55	269.89	3.71	134	77	-.85	.00	44.45	81.61
19	9	27	43.48	270.31	1.21	133	77	-.83	.00	44.46	81.54
19	9	27	43.42	270.69	1.33	133	77	-.85	.00	44.36	81.35
19	9	27	43.35	271.09	3.83	134	77	-.81	.00	44.31	81.18
19	9	27	43.28	271.49	6.34	134	77	-.80	.00	44.62	81.75
19	9	27	43.21	271.89	8.86	135	77	-.73	.00	45.22	82.53
19	9	27	43.44	269.00	8.74	135	77	.37	.00	45.15	82.53
19	9	27	43.38	269.41	6.22	134	77	.33	.00	45.09	82.27
19	9	27	43.32	269.81	3.71	134	77	.36	.00	45.32	82.68
19	9	27	43.25	270.22	1.24	133	77	.37	.00	45.33	82.44
19	9	27	43.19	270.60	1.30	133	77	.34	.00	45.14	82.25
19	9	27	43.12	270.99	3.80	134	77	.37	.00	45.10	82.07
19	9	27	43.05	271.39	6.29	134	77	.36	.00	45.32	82.28
19	9	27	42.98	271.79	8.80	135	77	.30	.00	45.48	82.52
19	9	28	43.14	269.37	5.91	134	77	*****			
19	9	28	43.08	269.77	3.40	134	77	*****			
19	9	28	43.01	270.17	.96	133	77	*****			
19	9	28	42.95	270.56	1.58	133	77	*****			
19	9	28	42.88	270.95	4.09	134	77	*****			
19	9	28	42.81	271.35	6.60	134	77	*****			
19	9	28	42.74	271.75	9.11	135	77	*****			
19	9	28	42.91	269.27	6.08	134	77	.34	.00	45.26	82.60
19	9	28	42.85	269.66	3.57	134	77	.38	.00	45.23	82.65
19	9	28	42.79	270.07	1.10	133	77	.26	.00	45.06	82.23
19	9	28	42.72	270.45	1.44	133	77	.36	.00	45.04	82.21
19	20	55	42.86	269.70	42.03	183	79	22.45	38.63	49.15	87.06
19	20	55	42.80	269.02	39.35	176	79	21.99	37.83	48.92	86.67
19	20	56	43.09	269.70	42.21	183	79	*****			
19	20	56	43.03	269.00	39.50	176	79	*****			
19	20	56	43.33	269.68	42.37	184	79	21.36	36.74	49.07	86.75
19	20	56	43.55	269.54	42.03	183	79	21.12	36.33	48.89	86.69
19	20	56	43.79	269.50	42.09	183	79	20.62	35.46	48.84	86.65
19	20	56	44.02	269.49	42.24	183	79	19.80	34.04	48.81	86.53
19	20	56	44.25	269.37	42.03	183	79	19.48	33.49	48.81	86.64
19	20	56	44.49	269.34	42.09	183	79	19.80	34.05	48.63	86.53
19	20	56	44.72	269.36	42.37	184	79	20.32	34.96	48.56	85.97
19	20	56	44.96	269.31	42.40	184	78	*****			
19	20	56	45.18	269.17	42.09	183	78	19.34	33.26	48.14	85.11

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
21	9	5	45.19	270.66	31.70	157	77	.14	.00	43.47	78.55
21	9	5	45.12	271.21	29.10	153	77	.00	.00	43.72	78.92
21	9	5	45.06	271.73	26.52	149	77	.08	.00	44.08	79.53
21	9	5	45.08	269.41	36.94	167	77	-1.09	.00	44.06	79.76
21	9	5	45.01	270.03	34.26	161	77	-1.17	.00	43.45	78.61
21	9	5	44.95	270.60	31.67	157	77	-1.07	.00	43.32	78.45
21	9	5	44.89	271.15	29.04	152	77	-1.08	.00	43.48	78.64
21	9	5	44.83	271.67	26.49	149	77	-1.11	.00	43.93	79.25
21	9	5	44.84	269.43	36.61	166	77	-.91	.00	44.30	80.31
21	9	5	44.77	270.03	33.97	161	77	-.85	.00	43.86	79.52
21	9	5	44.71	270.60	31.35	156	77	-.86	.00	43.81	79.37
21	9	5	44.65	271.14	28.75	152	77	-.86	.00	43.89	79.56
21	9	5	44.59	271.66	26.17	149	77	-.86	.00	44.34	80.00
21	9	5	44.61	269.34	36.73	166	77	.12	.00	45.26	81.56
21	9	5	44.54	269.94	34.08	161	77	.03	.00	44.55	80.59
21	9	5	44.48	270.51	31.47	156	77	.11	.00	44.68	80.61
21	9	5	44.42	271.05	28.87	152	77	.09	.00	44.85	80.79
21	9	5	44.36	271.57	26.28	149	77	.06	.00	45.20	81.40
21	9	5	44.38	269.26	36.82	167	77	-1.07	.00	44.83	81.37
21	9	5	44.31	269.87	34.14	161	77	-1.03	.00	44.12	80.22
21	9	5	44.25	270.43	31.55	156	77	-1.05	.00	44.17	80.06
21	9	5	44.19	270.97	28.92	152	77	-1.06	.00	44.51	80.61
21	9	5	44.13	271.48	26.37	149	77	-1.08	.00	44.86	81.04
21	9	5	44.07	271.97	23.80	146	77	-1.09	.00	45.01	81.31
21	9	6	44.15	269.13	37.09	167	77	*****			
21	9	6	44.09	269.74	34.44	162	77	*****			
21	9	6	44.02	270.31	31.82	157	77	*****			
21	9	6	43.96	270.85	29.22	153	77	*****			
21	9	6	43.90	271.36	26.63	149	77	*****			
21	9	6	43.84	271.85	24.06	146	77	*****			
21	9	6	43.91	269.07	37.09	167	77	.48	.00	46.58	83.77
21	9	6	43.85	269.68	34.44	162	77	.53	.00	45.70	82.62
21	9	6	43.79	270.24	31.82	157	77	.51	.00	45.39	82.10
21	9	6	43.73	270.78	29.21	153	77	.50	.00	45.56	82.29
21	9	6	43.67	271.29	26.63	149	77	.47	.00	45.83	82.54
21	9	6	43.61	271.77	24.09	146	77	.58	.00	45.97	82.98
21	9	6	43.67	269.08	36.79	166	77	.48	.00	46.59	84.32
21	9	6	43.61	269.69	34.11	161	77	.40	.00	45.80	82.99
21	9	6	43.55	270.24	31.52	156	77	.38	.00	45.58	82.65
21	9	6	43.49	270.78	28.89	152	77	.37	.00	45.75	82.66
21	9	6	43.43	271.28	26.34	149	77	.35	.00	45.93	82.91
21	9	6	43.37	271.76	23.77	146	77	.34	.00	46.16	83.35
21	9	6	43.38	269.59	34.29	161	77	.39	.00	46.40	83.45
21	9	6	43.32	270.15	31.67	157	77	.37	.00	46.27	83.11
21	9	6	43.26	270.68	29.07	153	77	.36	.00	46.18	83.12
21	9	6	43.20	271.18	26.49	149	77	.34	.00	46.18	83.19
21	9	6	43.14	271.67	23.92	146	77	.32	.00	46.50	83.81
21	9	6	43.14	269.57	34.08	161	77	.19	.00	46.25	83.51
21	9	6	43.08	270.12	31.46	156	77	.15	.00	46.20	83.17
21	9	6	43.02	270.65	28.86	152	77	.01	.00	46.28	83.36
21	9	6	42.96	271.15	26.28	149	77	.09	.00	46.46	83.61
21	9	6	42.90	271.63	23.74	146	77	.06	.00	46.69	84.04
21	9	6	42.91	269.49	34.14	161	77	-.91	.00	45.66	82.94
21	9	6	42.85	270.04	31.55	156	77	-.91	.00	45.62	82.79
21	9	6	42.79	270.57	28.95	152	77	-.79	.00	45.70	82.80



Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
21	9	6	42.73	271.07	26.37	149	77	-.80	.00	45.97	83.23
21	20	34	42.92	271.58	26.40	152	78	22.67	38.91	50.69	89.13
21	20	34	42.86	271.09	23.82	148	78	21.36	36.64	51.26	90.42
21	20	34	42.81	270.62	21.26	146	78	19.32	33.13	50.98	90.12
21	20	34	42.75	270.16	18.71	143	78	19.01	32.59	51.24	90.32
21	20	34	43.16	271.56	26.66	152	78	20.27	34.77	50.80	89.49
21	20	34	43.10	271.07	24.08	149	78	21.45	36.79	50.86	89.81
21	20	34	43.04	270.60	21.52	146	78	19.77	33.90	50.58	89.41
21	20	34	42.99	270.14	18.97	144	78	18.50	31.72	51.02	89.97
21	20	34	42.93	269.70	16.45	142	78	18.36	31.48	50.70	89.53
21	20	34	42.87	269.26	13.92	140	78	17.75	30.42	50.15	88.57
21	20	34	43.39	271.50	26.69	152	78	19.72	33.82	51.00	89.94
21	20	34	43.33	271.01	24.14	149	78	21.13	36.25	50.96	90.12
21	20	34	43.28	270.53	21.55	146	78	19.45	33.35	50.59	89.71
21	20	34	43.22	270.07	19.03	144	78	17.71	30.34	51.21	90.58
21	20	34	43.16	269.63	16.48	141	78	17.22	29.49	51.06	90.25
21	20	34	43.11	269.19	13.95	140	78	16.84	28.84	50.42	88.97
21	20	34	43.67	271.90	28.99	155	78	17.76	30.44	50.16	88.84
21	20	34	43.62	271.38	26.40	151	78	20.09	34.46	50.77	89.76
21	20	34	43.56	270.88	23.82	148	78	22.44	38.50	50.57	89.95
21	20	34	43.50	270.40	21.26	146	78	20.15	34.56	50.37	89.64
21	20	34	43.44	269.94	18.71	143	78	17.57	30.09	50.98	90.71
21	20	34	43.39	269.50	16.17	141	78	16.58	28.39	51.09	90.85
21	20	34	43.33	269.06	13.63	140	78	15.84	27.11	50.37	89.70
21	20	34	43.91	271.89	29.28	156	78	16.05	27.48	49.31	88.84
21	20	34	43.85	271.37	26.69	152	78	18.18	31.15	49.93	89.84
21	20	34	43.80	270.87	24.11	149	78	23.51	40.36	49.55	89.30
21	20	34	43.74	270.39	21.55	146	78	22.68	38.92	49.18	88.67
21	20	34	43.68	269.92	19.00	143	78	18.35	31.45	50.06	90.26
21	20	34	43.63	269.48	16.48	141	78	16.33	27.95	50.35	91.07
21	20	34	43.57	269.04	13.95	140	78	15.37	26.30	49.89	90.21
21	20	34	44.14	271.80	29.16	155	78	17.23	29.53	49.66	87.48
21	20	34	44.08	271.27	26.57	152	78	18.28	31.33	50.28	88.50
21	20	34	44.03	270.78	24.03	149	78	23.00	39.48	50.16	88.40
21	20	34	43.97	270.29	21.43	146	78	23.46	40.27	49.61	87.85
21	20	34	43.91	269.83	18.91	143	78	18.88	32.36	50.66	89.59
21	20	34	43.85	269.38	16.37	141	78	17.08	29.24	51.12	90.31
21	20	34	44.37	271.69	28.96	155	78	*****			
21	20	34	44.31	271.17	26.40	151	78	*****			
21	20	34	44.25	270.67	23.82	148	78	*****			
21	20	34	44.20	270.19	21.26	146	78	*****			
21	20	34	44.14	269.72	18.71	143	78	*****			
21	20	34	44.08	269.27	16.17	141	78	*****			
21	20	34	44.60	271.66	29.13	155	78	15.77	26.98	49.07	87.82
21	20	34	44.55	271.13	26.54	152	78	15.39	26.33	49.78	89.29
21	20	34	44.49	270.63	23.97	148	78	15.61	26.72	50.00	89.97
21	20	34	44.43	270.14	21.40	146	78	17.73	30.38	49.37	88.99
21	20	34	44.37	269.67	18.85	143	78	15.99	27.37	50.16	90.55
21	20	34	44.31	269.22	16.34	141	78	14.43	24.68	50.62	91.28
21	20	34	44.83	271.55	28.96	155	78	15.03	25.72	48.82	87.44
21	20	34	44.77	271.03	26.37	151	78	14.90	25.50	49.27	88.40
21	20	34	44.72	270.53	23.82	148	78	15.14	25.91	49.50	88.88
21	20	34	44.66	270.03	21.23	146	78	16.20	27.74	49.04	88.42
21	20	34	44.60	269.57	18.71	143	78	15.90	27.22	49.74	89.68
21	20	34	44.54	269.11	16.17	141	78	15.07	25.78	50.29	90.53

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
21	20	34	45.06	271.49	28.96	155	78	15.50	26.54	49.38	86.53
21	20	34	45.01	270.96	26.40	151	78	15.72	26.90	49.57	87.03
21	20	34	44.95	270.45	23.82	148	78	16.30	27.92	49.71	87.39
21	20	34	44.89	269.97	21.26	146	78	17.11	29.32	49.16	86.90
21	20	34	44.83	269.49	18.71	143	78	17.15	29.38	49.95	88.25
21	20	34	44.77	269.04	16.17	141	78	16.18	27.70	50.59	89.65
21	20	35	45.18	270.41	23.97	148	78	15.65	26.79	49.47	86.74
21	20	35	45.12	269.92	21.40	146	78	16.23	27.78	48.84	86.03
21	20	35	45.07	269.44	18.85	143	78	16.27	27.85	49.54	87.20
22	8	55	45.10	270.83	42.10	180	77	-1.06	.00	42.09	77.71
22	8	55	45.04	271.53	39.40	172	77	-1.04	.00	44.72	82.56
22	8	55	44.87	270.72	42.28	180	77	-1.05	.00	39.99	75.80
22	8	55	44.81	271.43	39.58	173	77	-1.02	.00	43.23	79.81
22	8	55	44.64	270.67	42.28	180	77	.27	.00	38.49	69.64
22	8	55	44.58	271.36	39.61	173	77	.28	.00	42.07	75.83
22	8	55	44.41	270.57	42.47	181	77	-.08	.00	36.18	68.57
22	8	55	44.35	271.26	39.76	173	77	-.08	.00	39.50	74.86
22	8	55	44.28	271.91	37.08	167	77	.01	.00	43.75	80.78
22	8	55	44.17	270.56	42.28	180	77	-1.15	.00	35.20	66.72
22	8	55	44.11	271.25	39.58	173	77	-1.13	.00	37.22	70.54
22	8	55	44.05	271.89	36.91	167	77	-1.12	.00	41.65	78.93
22	8	55	43.94	270.47	42.40	181	77	-.03	.00	37.52	68.36
22	8	55	43.88	271.16	39.73	173	77	.08	.00	37.70	68.44
22	8	55	43.82	271.80	37.05	167	77	.06	.00	39.94	72.37
22	8	55	43.70	270.49	42.13	180	77	-1.11	.00	38.07	69.64
22	8	55	43.64	271.17	39.43	173	77	-1.09	.00	38.77	70.80
22	8	55	43.58	271.81	36.76	166	77	-1.08	.00	39.10	71.15
22	8	55	43.47	270.40	42.25	180	77	*****			
22	8	55	43.41	271.09	39.55	173	77	*****			
22	8	55	43.35	271.72	36.87	167	77	*****			
22	8	55	43.24	270.34	42.28	180	77	.31	.00	34.83	63.55
22	8	55	43.18	271.02	39.61	173	77	.44	.00	40.33	72.96
22	8	55	43.11	271.65	36.93	167	77	.43	.00	43.53	78.17
22	8	55	43.00	270.33	42.10	180	77	-.06	.00	36.23	66.20
22	8	55	42.94	271.01	39.40	172	77	-.06	.00	41.12	73.99
22	8	55	42.88	271.64	36.72	166	77	.03	.00	44.23	79.38
22	8	55	42.77	270.23	42.28	180	77	-1.22	.00	36.49	66.76
22	8	55	42.71	270.91	39.58	173	77	-1.08	.00	39.90	72.40
22	20	23	42.92	271.66	12.01	139	78	*****			
22	20	23	42.86	271.24	9.52	138	78	*****			
22	20	23	42.80	270.83	7.00	137	78	*****			
22	20	23	42.74	270.42	4.48	136	78	*****			
22	20	23	43.15	271.59	12.07	139	78	48.76	84.23	25.96	47.30
22	20	23	43.09	271.17	9.55	138	78	49.66	85.78	26.35	47.82
22	20	23	43.03	270.76	7.03	137	78	52.94	91.44	25.76	46.75
22	20	23	42.97	270.35	4.51	136	78	59.97	103.60	24.61	44.45
22	20	23	42.91	269.95	2.03	136	78	66.97	115.70	24.33	43.94
22	20	23	42.85	269.54	.54	136	78	67.66	116.79	26.95	48.48
22	20	23	42.79	269.14	3.02	136	78	60.45	104.36	29.62	53.24
22	20	23	43.43	271.90	14.40	140	78	49.18	84.94	24.67	45.56
22	20	23	43.37	271.48	11.87	139	78	49.22	85.01	25.19	46.48
22	20	23	43.32	271.06	9.35	137	78	46.80	80.83	26.71	49.07
22	20	23	43.26	270.64	6.83	137	78	49.36	85.26	26.83	48.95
22	20	23	43.20	270.23	4.31	136	78	57.22	98.84	25.32	46.44
22	20	23	43.14	269.84	1.86	136	78	67.31	116.27	24.44	44.52

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
22	20	23	43.07	269.43	.73	136	78	70.96	122.51	27.23	49.26
22	20	23	43.01	269.03	3.19	136	78	63.27	109.23	30.51	55.00
22	20	23	43.65	271.74	13.86	140	78	50.58	87.37	23.50	43.64
22	20	23	43.59	271.31	11.33	138	78	49.67	85.80	24.46	44.92
22	20	23	43.53	270.89	8.84	137	78	46.07	79.57	26.24	48.02
22	20	23	43.47	270.48	6.32	136	78	45.31	78.26	27.49	50.34
22	20	23	43.41	270.07	3.80	136	78	52.34	90.41	26.33	48.22
22	20	23	43.35	269.67	1.33	136	78	65.75	113.58	24.84	45.29
22	20	23	43.29	269.26	1.22	136	78	71.78	123.92	26.58	47.95
22	20	23	43.89	271.75	14.37	140	78	50.40	87.07	23.51	43.48
22	20	23	43.83	271.31	11.84	139	78	50.80	87.75	23.86	44.10
22	20	23	43.78	270.89	9.32	137	78	46.84	80.90	25.29	46.60
22	20	23	43.72	270.47	6.80	137	78	44.90	77.54	26.98	49.41
22	20	23	43.66	270.06	4.28	136	78	44.22	76.37	28.26	51.62
22	20	23	43.60	269.66	1.80	136	78	55.85	96.47	26.07	47.47
22	20	23	43.53	269.25	.76	136	78	68.04	117.47	25.29	45.70
22	20	23	44.17	272.00	16.25	141	78	47.82	82.61	24.26	44.95
22	20	23	44.11	271.55	13.72	140	78	50.29	86.87	23.75	44.00
22	20	23	44.05	271.12	11.19	138	78	50.93	87.97	24.09	44.31
22	20	23	43.99	270.70	8.67	137	78	49.81	86.04	24.83	45.53
22	20	23	43.93	270.28	6.15	136	78	45.85	79.19	27.30	49.77
22	20	23	43.87	269.87	3.63	136	78	39.12	67.57	29.80	54.28
22	20	23	43.81	269.46	1.19	136	78	47.55	82.13	27.52	50.26
22	20	23	43.75	269.06	1.36	136	78	60.10	103.75	25.43	46.40
22	20	23	44.40	271.94	16.40	141	78	46.22	79.83	24.49	45.03
22	20	23	44.34	271.50	13.86	140	78	49.52	85.53	24.24	44.59
22	20	23	44.28	271.07	11.33	138	78	50.86	87.85	24.23	44.50
22	20	23	44.23	270.65	8.84	137	78	53.18	91.87	24.09	44.02
22	20	23	44.17	270.23	6.32	136	78	51.83	89.53	26.56	48.20
22	20	23	44.10	269.81	3.80	136	78	40.00	69.09	30.82	55.71
22	20	23	44.04	269.41	1.33	136	78	37.99	65.61	30.02	54.44
22	20	23	44.64	271.96	16.91	142	78	40.25	69.52	25.87	47.74
22	20	23	44.59	271.51	14.37	140	78	44.49	76.84	24.92	46.24
22	20	23	44.53	271.07	11.84	139	78	47.48	82.01	24.66	45.74
22	20	23	44.47	270.65	9.32	137	78	50.62	87.43	24.08	44.54
22	20	23	44.41	270.22	6.80	137	78	55.66	96.14	24.81	45.79
22	20	23	44.35	269.81	4.28	136	78	51.17	88.38	28.27	51.80
22	20	23	44.28	269.40	1.80	136	78	42.86	74.02	29.83	54.41
22	20	24	44.86	271.79	16.39	141	78	*****	*****	*****	*****
22	20	24	44.80	271.34	13.86	140	78	*****	*****	*****	*****
22	20	24	44.75	270.91	11.33	138	78	*****	*****	*****	*****
22	20	24	44.69	270.48	8.81	137	78	*****	*****	*****	*****
22	20	24	44.63	270.06	6.32	136	78	*****	*****	*****	*****
22	20	24	44.56	269.64	3.77	136	78	*****	*****	*****	*****
22	20	24	44.50	269.23	1.30	136	78	*****	*****	*****	*****
22	20	24	45.09	271.71	16.39	141	78	40.07	69.21	25.54	46.79
22	20	24	45.04	271.26	13.86	140	78	42.06	72.66	25.03	45.94
22	20	24	44.98	270.82	11.33	138	78	43.05	74.36	24.94	45.78
22	20	24	44.92	270.40	8.84	137	78	45.37	78.37	24.62	45.12
22	20	24	44.86	269.97	6.32	136	78	48.53	83.83	24.48	44.57
22	20	24	44.79	269.56	3.80	136	78	49.39	85.32	25.59	46.52
22	20	24	44.73	269.14	1.33	136	78	46.55	80.41	27.75	50.29
22	20	24	45.14	270.28	8.64	137	78	35.72	61.69	28.00	51.13
22	20	24	45.08	269.86	6.12	136	78	39.82	68.77	26.90	49.32
22	20	24	45.02	269.44	3.60	136	78	41.39	71.49	27.14	49.97

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
22	20	24	44.95	269.01	1.13	136	78	43.41	74.98	27.30	50.16
23	20	12	42.85	271.72	3.84	136	78	44.10	76.04	42.77	78.37
23	20	12	42.78	271.32	6.35	136	78	48.73	84.03	43.13	78.46
23	20	12	42.72	270.91	8.87	137	78	50.34	86.82	43.87	79.71
23	20	12	43.08	271.64	3.81	136	78	40.73	70.23	44.00	78.90
23	20	12	43.01	271.23	6.33	136	78	44.28	76.36	43.40	77.91
23	20	12	42.95	270.83	8.82	137	78	49.08	84.65	43.53	77.97
23	20	12	42.88	270.42	11.34	138	78	50.96	87.89	44.53	79.57
23	20	12	42.80	270.00	13.87	140	78	49.84	85.96	45.11	80.14
23	20	12	42.73	269.57	16.40	141	78	47.79	82.42	45.02	80.20
23	20	12	43.37	271.93	1.47	136	78	*****			
23	20	12	43.30	271.52	3.98	136	78	*****			
23	20	12	43.24	271.12	6.50	136	78	*****			
23	20	12	43.17	270.71	9.02	137	78	*****			
23	20	12	43.10	270.29	11.54	138	78	*****			
23	20	12	43.02	269.87	14.07	140	78	*****			
23	20	12	42.95	269.45	16.60	141	78	*****			
23	20	12	42.87	269.01	19.14	143	78	*****			
23	20	12	43.60	271.85	1.45	136	78	47.47	81.87	44.86	80.89
23	20	12	43.53	271.44	3.95	136	78	51.29	88.46	44.58	80.56
23	20	12	43.47	271.03	6.47	136	78	46.30	79.85	44.93	81.41
23	20	12	43.40	270.62	8.99	137	78	43.29	74.64	44.89	81.46
23	20	12	43.33	270.20	11.51	138	78	48.13	83.00	44.67	80.91
23	20	12	43.25	269.79	14.01	140	78	50.57	87.21	44.46	80.70
23	20	12	43.18	269.36	16.54	141	78	47.10	81.22	44.11	79.96
23	20	12	43.83	271.78	1.31	136	78	53.28	91.89	43.61	79.01
23	20	12	43.77	271.37	3.81	136	78	55.57	95.85	43.68	78.93
23	20	12	43.70	270.97	6.30	136	78	55.34	95.44	44.21	79.91
23	20	12	43.63	270.55	8.85	137	78	51.38	88.62	44.25	80.32
23	20	12	43.56	270.14	11.34	138	78	49.72	85.75	44.30	80.34
23	20	12	43.49	269.72	13.87	140	78	43.50	83.64	44.44	80.34
23	20	12	43.41	269.29	16.40	141	78	41.49	71.53	44.53	80.90
23	20	12	44.06	271.70	1.25	136	78	56.53	97.52	42.74	75.98
23	20	12	44.00	271.29	3.76	136	78	58.21	100.43	43.41	76.87
23	20	12	43.93	270.88	6.27	136	78	58.56	101.03	43.85	77.62
23	20	12	43.86	270.47	8.79	137	78	59.45	102.57	43.46	76.96
23	20	12	43.79	270.05	11.31	138	78	57.07	98.46	43.95	77.59
23	20	12	43.72	269.63	13.84	140	78	47.90	82.61	45.13	79.54
23	20	12	43.64	269.19	16.37	141	78	37.55	64.75	46.26	81.83
23	20	13	44.35	271.98	1.10	135	78	45.90	79.16	43.62	78.28
23	20	13	44.29	271.58	1.45	135	78	52.50	90.56	41.97	75.34
23	20	13	44.22	271.17	3.95	136	78	56.66	97.74	41.95	75.28
23	20	13	44.15	270.76	6.47	136	78	56.75	97.90	42.04	75.47
23	20	13	44.09	270.34	8.99	137	78	57.51	99.21	41.82	75.16
23	20	13	44.01	269.92	11.51	138	78	56.30	97.12	42.74	76.56
23	20	13	43.94	269.50	14.04	140	78	48.53	83.70	44.01	78.97
23	20	13	43.86	269.07	16.55	141	78	37.82	65.20	45.66	81.93
23	20	13	44.59	271.95	1.35	135	78	47.82	82.46	43.07	78.31
23	20	13	44.52	271.53	1.20	135	78	50.77	87.56	41.68	75.55
23	20	13	44.46	271.12	3.70	136	78	53.89	92.95	40.97	74.37
23	20	13	44.39	270.71	6.21	136	78	52.94	91.32	41.06	74.68
23	20	13	44.32	270.29	8.70	137	78	52.55	90.63	41.19	75.02
23	20	13	44.25	269.87	11.23	138	78	53.14	91.66	41.77	75.83
23	20	13	44.17	269.45	13.76	139	78	50.02	86.27	42.78	77.62
23	20	13	44.10	269.01	16.29	141	78	42.65	73.55	44.35	80.09

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
23	20	13	44.82	271.85	1.30	135	78	48.49	83.63	43.66	77.48
23	20	13	44.75	271.43	1.25	135	78	51.43	88.71	42.62	75.64
23	20	13	44.69	271.02	3.76	136	78	53.70	92.64	41.90	74.49
23	20	13	44.62	270.60	6.27	136	78	52.51	90.58	41.73	74.24
23	20	13	44.55	270.19	8.79	137	78	52.81	91.09	41.77	74.55
23	20	13	44.48	269.76	11.31	138	78	55.28	95.36	42.08	74.82
23	20	13	44.40	269.34	13.84	139	78	55.11	95.07	42.65	75.74
23	20	13	45.04	271.71	1.10	135	78	48.07	82.91	44.09	77.97
23	20	13	44.98	271.31	1.45	135	78	50.89	87.78	43.22	76.46
23	20	13	44.91	270.89	3.95	136	78	54.00	93.15	42.15	74.75
23	20	13	44.84	270.48	6.47	136	78	54.46	93.95	41.63	73.91
23	20	13	44.77	270.06	8.99	137	78	54.88	94.67	41.33	73.70
23	20	13	44.70	269.63	11.51	138	78	54.86	94.65	41.55	74.05
23	20	13	44.62	269.21	14.01	140	78	56.59	97.63	42.04	74.61
23	20	13	45.15	270.84	3.70	136	78	*****	*****	*****	*****
23	20	13	45.08	270.43	6.21	136	78	*****	*****	*****	*****
23	20	13	45.01	270.01	8.70	137	78	*****	*****	*****	*****
23	20	13	44.93	269.58	11.23	138	78	*****	*****	*****	*****
23	20	13	44.86	269.15	13.76	139	78	*****	*****	*****	*****
23	20	13	45.15	269.43	11.54	138	78	54.84	94.60	40.71	73.84
24	20	1	42.73	271.82	19.09	143	78	50.20	86.57	38.79	68.94
24	20	1	42.96	271.75	18.94	143	78	46.64	80.42	40.49	71.96
24	20	1	42.88	271.30	21.49	146	78	50.25	86.65	38.14	68.33
24	20	1	42.79	270.84	24.06	148	78	59.13	101.98	35.52	63.81
24	20	1	43.19	271.66	18.92	143	78	55.45	95.62	40.40	71.53
24	20	1	43.11	271.21	21.44	145	78	53.01	91.42	38.65	68.77
24	20	1	43.02	270.75	24.00	148	78	53.00	91.40	36.99	66.19
24	20	1	42.92	270.27	26.57	151	78	59.20	102.10	34.60	62.26
24	20	1	42.82	269.77	29.16	155	78	65.23	112.52	33.18	59.40
24	20	1	42.71	269.25	31.77	159	78	69.84	120.32	32.27	57.88
24	20	1	43.49	271.97	16.54	141	78	56.78	97.94	41.18	72.19
24	20	1	43.41	271.53	19.09	143	78	58.77	101.37	39.17	69.09
24	20	1	43.33	271.08	21.64	146	78	55.98	96.56	38.12	67.51
24	20	1	43.23	270.61	24.20	148	78	52.42	90.40	37.15	65.70
24	20	1	43.14	270.13	26.78	152	78	53.41	92.10	35.72	63.68
24	20	1	43.04	269.62	29.37	155	78	60.98	105.18	34.21	61.10
24	20	1	42.93	269.10	31.98	160	78	67.01	115.44	33.91	60.38
24	20	2	43.72	271.90	16.40	141	78	*****	*****	*****	*****
24	20	2	43.64	271.45	18.94	143	78	*****	*****	*****	*****
24	20	2	43.56	271.00	21.49	145	78	*****	*****	*****	*****
24	20	2	43.47	270.53	24.06	148	78	*****	*****	*****	*****
24	20	2	43.37	270.05	26.63	151	78	*****	*****	*****	*****
24	20	2	43.27	269.55	29.22	155	78	*****	*****	*****	*****
24	20	2	43.16	269.02	31.83	159	78	*****	*****	*****	*****
24	20	2	43.95	271.76	16.60	141	78	53.32	91.95	33.02	59.57
24	20	2	43.86	271.32	19.14	143	78	50.81	87.61	33.28	60.30
24	20	2	43.78	270.87	21.67	146	78	50.03	86.27	35.28	63.58
24	20	2	43.69	270.40	24.23	148	78	53.22	91.78	35.97	64.49
24	20	2	43.59	269.91	26.81	152	78	55.98	96.54	35.15	63.34
24	20	2	43.49	269.41	29.40	155	78	56.45	97.35	35.03	62.67
24	20	2	44.18	271.67	16.54	141	78	39.09	67.39	34.09	61.81
24	20	2	44.09	271.23	19.09	143	78	40.02	68.98	33.73	61.38
24	20	2	44.01	270.77	21.64	146	78	41.96	72.34	35.74	64.44
24	20	2	43.91	270.30	24.20	148	78	46.10	79.49	36.17	65.38
24	20	2	43.82	269.81	26.78	152	78	53.49	92.24	34.73	62.53

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
24	20	2	43.71	269.31	29.37	155	78	52.88	91.20	35.66	63.65
24	20	2	44.41	271.60	16.40	141	78	28.62	49.30	38.18	68.95
24	20	2	44.32	271.15	18.94	143	78	30.13	51.91	38.00	68.81
24	20	2	44.24	270.69	21.50	145	78	34.10	58.76	37.39	67.58
24	20	2	44.15	270.22	24.06	148	78	37.52	64.68	36.51	65.85
24	20	2	44.05	269.73	26.63	151	78	41.94	72.32	35.68	64.11
24	20	2	43.94	269.23	29.22	155	78	42.29	72.91	36.79	65.76
24	20	2	44.71	271.90	14.07	140	78	30.97	53.35	36.97	67.17
24	20	2	44.63	271.46	16.60	141	78	29.75	51.24	38.97	70.51
24	20	2	44.55	271.02	19.15	143	78	30.20	52.02	39.58	71.60
24	20	2	44.46	270.56	21.67	146	78	30.48	52.52	39.23	70.77
24	20	2	44.37	270.09	24.23	148	78	31.54	54.35	37.39	67.71
24	20	2	44.27	269.59	26.81	152	78	32.29	55.64	36.91	66.72
24	20	2	44.16	269.08	29.40	155	78	34.06	58.69	38.02	68.64
24	20	2	44.94	271.81	14.04	139	78	30.13	51.90	39.73	71.62
24	20	2	44.86	271.37	16.55	141	78	32.35	55.73	39.56	71.11
24	20	2	44.77	270.92	19.09	143	78	33.74	58.14	39.46	70.94
24	20	2	44.69	270.46	21.64	146	78	34.39	59.26	39.38	70.90
24	20	2	44.59	269.98	24.20	148	78	34.85	60.07	37.45	67.54
24	20	2	44.49	269.49	26.78	152	78	35.01	60.33	36.80	66.44
24	20	2	45.17	271.74	13.87	139	78	29.67	51.11	43.03	76.73
24	20	2	45.09	271.30	16.40	141	78	35.68	61.49	41.47	73.87
24	20	2	45.01	270.85	18.95	143	78	38.38	66.16	39.81	71.08
24	20	2	44.92	270.38	21.50	145	78	42.46	73.21	38.24	68.44
24	20	2	44.82	269.91	24.06	148	78	46.84	80.76	36.40	65.42
24	20	2	44.73	269.41	26.63	151	78	47.00	81.03	36.19	64.86
24	20	2	45.14	270.25	21.67	146	78	43.14	74.37	39.09	70.23
24	20	2	45.04	269.77	24.23	148	78	51.41	88.65	36.73	66.15
24	20	2	44.94	269.27	26.81	152	78	51.79	89.31	36.86	66.22
24	20	2	45.18	269.19	26.66	151	78	*****			
25	10	3	45.14	270.90	42.35	180	77	.18	.00	39.23	71.24
25	10	3	45.07	270.15	39.83	173	77	.17	.00	37.94	69.60
25	10	3	44.91	270.82	42.54	181	77	.17	.00	39.93	72.46
25	10	3	45.01	269.37	37.00	167	77	*****			
25	10	3	44.86	269.99	39.68	173	77	*****			
25	10	3	44.69	270.66	42.38	180	77	*****			
25	10	3	44.79	269.21	36.85	166	77	-.10	.00	38.94	71.78
25	10	3	44.64	269.83	39.53	173	77	-.11	.00	39.73	73.04
25	10	3	44.48	270.50	42.23	180	77	-.11	.00	39.19	71.95
25	10	3	44.55	269.17	37.18	167	77	.15	.00	38.92	71.20
25	10	3	44.40	269.79	39.86	173	77	.15	.00	38.32	70.31
25	10	3	44.24	270.45	42.53	181	77	.14	.00	37.00	68.32
25	10	3	44.33	269.01	37.00	167	77	.21	.00	36.63	67.39
25	10	3	44.19	269.63	39.68	173	77	.20	.00	36.29	66.86
25	10	3	44.03	270.29	42.38	180	77	.20	.00	35.40	65.59
25	10	4	43.97	269.48	39.52	173	77	.23	.00	35.59	65.96
25	10	4	43.81	270.13	42.23	180	77	.11	.00	34.79	64.87
25	10	4	43.73	269.43	39.83	173	77	.03	.00	35.87	66.13
25	10	4	43.57	270.09	42.53	181	77	.02	.00	33.94	63.24
25	10	4	43.52	269.28	39.67	173	77	.07	.00	35.59	65.97
25	10	4	43.36	269.93	42.38	180	77	.19	.00	32.61	61.11
25	10	4	43.30	269.16	39.64	173	77	.17	.00	34.83	64.51
25	10	4	43.14	269.81	42.35	180	77	.05	.00	31.59	59.30
25	10	4	43.07	269.05	39.70	173	77	*****			
25	10	4	42.91	269.71	42.41	180	77	*****			

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
25	19	51	42.79	271.92	31.92	159	78	69.62	119.76	30.89	56.62
25	19	51	43.02	271.82	31.89	159	78	68.85	118.42	33.55	61.72
25	19	51	42.90	271.27	34.51	164	78	71.16	122.40	33.57	61.42
25	19	51	42.77	270.69	37.17	170	78	73.51	126.46	32.46	59.76
25	19	51	43.24	271.69	31.97	159	78	74.49	128.16	31.69	56.85
25	19	51	43.12	271.14	34.60	164	78	76.54	131.71	31.37	56.34
25	19	51	42.99	270.56	37.26	170	78	77.34	133.08	29.81	53.88
25	19	51	42.85	269.94	39.91	176	78	80.78	139.01	26.85	49.15
25	19	51	43.47	271.62	31.80	159	78	73.51	126.48	27.51	49.61
25	19	51	43.35	271.07	34.43	164	78	77.46	133.29	27.44	49.63
25	19	51	43.23	270.48	37.08	170	78	78.02	134.25	27.37	49.64
25	19	51	43.08	269.86	39.76	176	78	79.67	137.11	26.15	47.99
25	19	51	42.93	269.20	42.47	183	78	82.28	141.61	26.40	47.55
25	19	51	43.70	271.52	31.77	159	78	68.97	118.65	25.66	47.52
25	19	51	43.58	270.96	34.40	164	78	73.87	127.11	25.85	47.53
25	19	51	43.45	270.38	37.05	170	78	75.98	130.73	26.31	48.54
25	19	51	43.31	269.76	39.73	176	78	77.75	133.79	25.44	47.09
25	19	51	43.15	269.09	42.44	183	78	79.89	137.47	25.60	47.47
25	19	51	44.04	271.95	29.13	155	78	*****	*****	*****	*****
25	19	51	43.93	271.42	31.74	159	78	*****	*****	*****	*****
25	19	51	43.81	270.86	34.37	164	78	*****	*****	*****	*****
25	19	51	43.68	270.27	37.02	169	78	*****	*****	*****	*****
25	19	51	43.53	269.66	39.67	176	78	*****	*****	*****	*****
25	19	51	44.26	271.83	29.19	155	78	61.40	105.75	25.43	46.36
25	19	51	44.15	271.29	31.80	159	78	65.43	112.56	25.83	47.03
25	19	51	44.03	270.73	34.43	164	78	65.59	112.83	26.81	48.69
25	19	51	43.90	270.14	37.08	170	78	70.18	120.74	26.04	47.46
25	19	51	43.75	269.52	39.76	176	78	73.61	126.66	25.18	46.32
25	19	51	44.49	271.72	29.16	155	78	54.54	93.90	25.85	47.93
25	19	51	44.37	271.19	31.77	159	78	62.01	106.65	25.81	47.63
25	19	51	44.25	270.63	34.40	164	78	61.69	106.10	26.79	49.37
25	19	51	44.12	270.04	37.05	169	78	64.98	111.77	26.46	48.98
25	19	51	43.98	269.41	39.73	176	78	67.46	116.05	25.77	48.02
25	19	51	44.70	271.57	29.37	155	78	50.76	87.35	27.13	50.25
25	19	51	44.59	271.03	31.98	159	78	57.87	99.50	26.31	48.63
25	19	51	44.47	270.47	34.61	164	78	56.72	97.52	27.64	50.76
25	19	51	44.33	269.87	37.26	170	78	59.53	102.37	27.92	51.36
25	19	51	44.19	269.25	39.91	176	78	62.61	107.67	27.14	50.33
25	19	51	44.94	271.49	29.22	155	78	46.58	80.14	29.16	53.42
25	19	51	44.82	270.96	31.80	159	78	50.01	85.96	28.34	52.02
25	19	51	44.70	270.39	34.43	164	78	51.83	89.09	29.06	53.44
25	19	51	44.57	269.80	37.08	169	78	55.00	94.55	29.34	53.93
25	19	51	44.42	269.16	39.76	176	78	59.85	102.92	27.95	51.79
25	19	51	45.16	271.39	29.16	155	78	38.82	66.74	32.66	60.24
25	19	51	45.05	270.85	31.77	159	78	37.86	64.99	32.37	59.85
25	19	51	44.93	270.28	34.40	164	78	43.82	75.26	31.17	57.93
25	19	51	44.79	269.69	37.05	169	78	48.04	82.54	30.84	57.56
25	19	51	44.64	269.05	39.73	176	78	57.62	99.06	28.24	53.26
25	19	51	45.14	270.15	34.49	164	78	36.67	63.00	35.59	65.77
25	19	51	45.01	269.55	37.14	170	78	44.10	75.82	33.94	63.27
26	9	52	45.17	270.90	31.68	156	77	.19	.00	38.73	70.90
26	9	52	45.04	271.45	34.30	161	77	.22	.00	39.30	71.88
26	9	52	45.16	269.79	26.70	149	77	.08	.00	36.24	66.84
26	9	52	45.05	270.30	29.28	153	77	.08	.00	37.77	69.52
26	9	52	44.94	270.82	31.85	157	77	.08	.00	39.12	71.60

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
26	9	52	44.81	271.38	34.48	162	77	.12	.00	39.61	72.75
26	9	52	44.68	271.96	37.12	167	77	.08	.00	40.08	73.49
26	9	52	45.04	269.16	23.95	146	77	-.36	.00	37.55	69.35
26	9	52	44.94	269.64	26.52	149	77	-.45	.00	37.02	68.30
26	9	52	44.83	270.15	29.11	152	77	-.47	.00	37.51	69.00
26	9	52	44.72	270.68	31.71	157	77	-.48	.00	39.21	71.62
26	9	52	44.59	271.23	34.33	161	77	-.45	.00	40.39	73.67
26	9	52	44.46	271.81	36.97	167	77	-.50	.00	40.61	74.22
26	9	53	44.81	269.07	24.04	146	77	*****			
26	9	53	44.71	269.55	26.61	149	77	*****			
26	9	53	44.60	270.05	29.19	153	77	*****			
26	9	53	44.49	270.58	31.79	157	77	*****			
26	9	53	44.36	271.13	34.42	161	77	*****			
26	9	53	44.23	271.71	37.06	167	77	*****			
26	9	53	44.48	269.46	26.70	149	77	-1.26	.00	36.73	69.63
26	9	53	44.37	269.96	29.28	153	77	-1.26	.00	36.79	69.73
26	9	53	44.26	270.48	31.85	157	77	-1.15	.00	39.45	74.76
26	9	53	44.14	271.03	34.47	162	77	-1.11	.00	40.37	76.51
26	9	53	44.00	271.61	37.12	167	77	-1.14	.00	40.06	75.92
26	9	53	44.25	269.36	26.75	149	77	-.68	.00	36.29	67.22
26	9	53	44.14	269.86	29.34	153	77	-.78	.00	37.14	68.66
26	9	53	44.03	270.39	31.94	157	77	-.65	.00	39.37	72.72
26	9	53	43.91	270.94	34.56	162	77	-.60	.00	40.03	74.06
26	9	53	43.77	271.52	37.21	167	77	-.49	.00	39.82	73.56
26	9	53	44.04	269.18	26.38	149	77	-.03	.00	38.19	69.23
26	9	53	43.93	269.68	28.96	152	77	-.03	.00	38.76	70.47
26	9	53	43.82	270.20	31.56	156	77	-.04	.00	40.98	74.15
26	9	53	43.70	270.74	34.18	161	77	.00	.00	42.07	75.84
26	9	53	43.57	271.32	36.82	166	77	.08	.00	41.67	75.49
26	9	53	43.43	271.92	39.46	172	77	.07	.00	42.12	76.32
26	9	53	43.80	269.12	26.58	149	77	.23	.00	36.89	67.91
26	9	53	43.70	269.61	29.16	153	77	.24	.00	37.47	69.16
26	9	53	43.59	270.12	31.73	157	77	.12	.00	39.60	72.49
26	9	53	43.47	270.67	34.35	161	77	.16	.00	39.74	72.93
26	9	53	43.34	271.24	37.00	167	77	.13	.00	40.13	73.31
26	9	53	43.19	271.85	39.67	173	77	.12	.00	42.15	76.82
26	9	53	43.48	269.47	28.99	152	77	.07	.00	37.97	69.93
26	9	53	43.37	269.99	31.59	156	77	.07	.00	39.67	72.73
26	9	53	43.25	270.53	34.21	161	77	.11	.00	39.64	72.45
26	9	53	43.12	271.10	36.85	166	77	.08	.00	40.81	74.62
26	9	53	42.98	271.70	39.52	173	77	.19	.00	43.44	79.04
26	9	53	43.24	269.43	29.31	153	77	.21	.00	37.82	69.79
26	9	53	43.13	269.94	31.91	157	77	.10	.00	39.77	72.94
26	9	53	43.01	270.49	34.53	162	77	.14	.00	40.61	74.28
26	9	53	42.88	271.05	37.15	167	77	.23	.00	42.57	77.72
26	9	53	42.73	271.67	39.85	173	77	.35	.00	43.63	79.60
26	9	53	43.02	269.29	29.16	153	77	.19	.00	37.48	68.89
26	9	53	42.91	269.80	31.73	157	77	.19	.00	40.05	72.94
26	9	53	42.79	270.34	34.35	161	77	.23	.00	41.58	75.71
26	9	53	42.79	269.22	29.33	153	77	*****			
26	19	40	43.01	271.86	42.62	184	78	72.62	125.22	43.83	77.88
26	19	40	43.25	271.81	42.35	183	78	73.27	126.35	43.76	78.32
26	19	40	43.47	271.70	42.32	183	78	77.57	133.78	43.38	76.97
26	19	40	43.70	271.60	42.25	183	78	73.59	135.54	42.07	73.97
26	19	40	43.90	271.39	42.59	184	78	73.08	134.67	41.56	73.56



Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
26	19	40	44.14	271.34	42.32	183	78	*****			
26	19	40	44.50	271.82	39.91	176	78	74.23	128.02	41.93	74.05
26	19	40	44.34	271.14	42.62	184	78	76.60	132.11	40.95	72.21
26	19	40	44.73	271.71	39.88	176	78	71.72	123.69	41.09	72.91
26	19	40	44.57	271.03	42.59	184	78	73.02	125.94	40.54	71.95
26	19	40	44.96	271.63	39.73	176	78	61.92	106.76	42.14	75.56
26	19	40	44.80	270.95	42.44	183	78	60.95	105.10	41.68	74.92
26	19	41	45.17	271.46	39.91	176	78	52.74	90.93	43.98	77.97
26	19	41	45.01	270.77	42.62	184	78	44.58	76.83	45.17	80.27
27	9	41	45.17	271.93	23.81	146	77	.18	.00	43.33	78.83
27	9	42	45.12	270.94	18.91	141	77	.28	.00	43.23	79.32
27	9	42	45.03	271.39	21.45	143	77	.21	.00	43.67	79.75
27	9	42	44.93	271.86	24.01	146	77	.20	.00	42.55	77.80
27	9	42	45.14	269.51	11.18	136	77	.21	.00	44.01	80.31
27	9	42	45.06	269.94	13.70	137	77	.16	.00	43.37	79.51
27	9	42	44.98	270.37	16.23	139	77	.13	.00	43.50	79.63
27	9	42	44.89	270.81	18.77	141	77	.22	.00	43.85	80.12
27	9	42	44.80	271.26	21.28	143	77	.15	.00	43.85	79.83
27	9	42	44.71	271.72	23.84	146	77	.15	.00	42.12	77.16
27	9	42	44.91	269.41	11.15	136	77	.21	.00	43.83	80.32
27	9	42	44.83	269.83	13.64	137	77	.16	.00	43.36	79.71
27	9	42	44.75	270.26	16.17	139	77	.13	.00	44.02	80.54
27	9	42	44.67	270.70	18.71	141	77	.22	.00	44.28	80.67
27	9	42	44.58	271.15	21.25	143	77	.15	.00	43.76	79.66
27	9	42	44.48	271.61	23.81	146	77	.14	.00	41.94	76.81
27	9	42	44.68	269.34	11.32	136	77	.15	.00	43.63	80.07
27	9	42	44.60	269.76	13.84	137	77	.22	.00	43.69	79.99
27	9	42	44.52	270.19	16.37	139	77	.07	.00	44.08	80.47
27	9	42	44.43	270.63	18.91	141	77	.04	.00	44.26	80.60
27	9	42	44.34	271.08	21.45	143	77	-.02	.00	43.57	79.41
27	9	42	44.25	271.54	24.01	146	77	-.03	.00	41.74	76.74
27	9	42	44.44	269.28	11.52	136	77	*****			
27	9	42	44.36	269.70	14.04	137	77	*****			
27	9	42	44.28	270.13	16.57	139	77	*****			
27	9	42	44.20	270.56	19.11	141	77	*****			
27	9	42	44.11	271.01	21.65	143	77	*****			
27	9	42	44.02	271.47	24.18	146	77	*****			
27	9	42	43.92	271.95	26.75	149	77	*****			
27	9	42	44.22	269.16	11.37	136	77	.02	.00	43.98	80.59
27	9	42	44.14	269.57	13.87	137	77	-.03	.00	44.20	80.52
27	9	42	44.06	270.00	16.40	139	77	-.06	.00	44.60	81.17
27	9	42	43.98	270.43	18.94	141	77	-.09	.00	44.43	80.94
27	9	42	43.89	270.88	21.48	143	77	-.04	.00	43.73	79.93
27	9	42	43.79	271.34	24.04	146	77	-.04	.00	42.17	77.26
27	9	42	43.70	271.82	26.61	149	77	-.13	.00	41.71	76.34
27	9	42	43.99	269.07	11.43	136	77	.31	.00	44.60	81.30
27	9	42	43.91	269.49	13.95	137	77	.26	.00	44.74	81.58
27	9	42	43.83	269.91	16.48	139	77	.34	.00	44.88	81.87
27	9	42	43.74	270.35	19.02	141	77	.20	.00	44.53	81.11
27	9	42	43.66	270.79	21.57	143	77	.13	.00	43.92	79.92
27	9	42	43.56	271.25	24.12	146	77	.13	.00	42.54	77.60
27	9	42	43.46	271.73	26.69	149	77	.05	.00	41.98	76.86
27	9	42	43.68	269.39	13.93	137	77	.30	.00	44.51	81.15
27	9	42	43.60	269.81	16.45	139	77	.15	.00	44.38	81.26
27	9	42	43.52	270.24	18.99	141	77	.12	.00	44.30	80.85

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
27	9	42	43.43	270.68	21.51	143	77	.06	.00	44.04	80.20
27	9	42	43.34	271.14	24.07	146	77	.17	.00	42.48	77.70
27	9	42	43.24	271.61	26.64	149	77	.20	.00	41.58	76.43
27	9	42	43.45	269.31	14.01	137	77	.21	.00	44.64	81.27
27	9	42	43.37	269.72	16.51	139	77	.17	.00	44.43	81.02
27	9	42	43.29	270.15	19.05	141	77	.15	.00	44.08	80.43
27	9	42	43.20	270.60	21.59	143	77	.20	.00	44.08	80.32
27	9	42	43.11	271.05	24.15	146	77	.19	.00	42.52	77.84
27	9	42	43.01	271.52	26.72	149	77	.22	.00	41.97	76.91
27	9	42	43.23	269.18	13.84	137	77	.20	.00	44.70	81.59
27	9	42	43.15	269.60	16.37	139	77	.17	.00	44.49	80.99
27	9	42	43.06	270.03	18.91	141	77	.14	.00	44.49	81.12
27	9	42	42.98	270.47	21.45	143	77	.07	.00	44.23	80.64
27	9	42	42.88	270.92	24.01	146	77	.07	.00	42.85	78.53
27	9	42	42.79	271.39	26.58	149	77	.10	.00	42.12	77.05
27	9	42	43.00	269.08	13.81	137	77	.40	.00	44.83	81.61
27	9	42	42.92	269.50	16.34	139	77	.25	.00	44.61	81.18
27	9	42	42.84	269.93	18.88	141	77	.10	.00	44.61	80.95
27	9	42	42.75	270.37	21.42	143	77	.15	.00	44.27	80.66
28	9	31	45.17	271.44	6.51	134	77	.35	.00	43.48	78.86
28	9	31	45.09	271.85	9.03	135	77	.42	.00	43.85	79.50
28	9	31	45.15	270.13	1.07	133	77	-.12	.00	42.94	77.88
28	9	31	45.08	270.52	1.47	133	77	-.16	.00	43.01	78.04
28	9	31	45.01	270.93	3.97	133	77	-.15	.00	43.10	78.20
28	9	31	44.94	271.34	6.48	134	77	-.18	.00	43.64	78.87
28	9	31	44.87	271.75	9.00	135	77	-.25	.00	44.10	79.68
28	9	31	45.05	269.18	6.22	134	77	-1.14	.00	41.92	76.08
28	9	31	44.99	269.59	3.71	133	77	-1.10	.00	42.54	77.22
28	9	31	44.92	270.02	1.21	133	77	-1.10	.00	42.67	77.36
28	9	31	44.85	270.41	1.33	133	77	-1.12	.00	42.74	77.53
28	9	31	44.79	270.82	3.83	133	77	-.98	.00	42.66	77.51
28	9	31	44.71	271.22	6.34	134	77	-.99	.00	43.20	78.33
28	9	31	44.64	271.63	8.86	135	77	-1.17	.00	43.67	78.99
28	9	31	44.82	269.13	6.02	134	77	-.66	.00	42.79	77.71
28	9	31	44.75	269.54	3.51	133	77	-.73	.00	42.98	77.95
28	9	31	44.68	269.96	1.02	133	77	-.71	.00	42.93	77.92
28	9	31	44.62	270.35	1.53	133	77	-.72	.00	43.01	78.08
28	9	31	44.55	270.76	4.03	133	77	-.80	.00	43.01	78.07
28	9	31	44.48	271.16	6.51	134	77	-.67	.00	43.56	78.92
28	9	31	44.41	271.57	9.03	135	77	-.59	.00	43.93	79.56
28	9	31	44.33	271.98	11.54	136	77	-.59	.00	44.29	80.13
28	9	31	44.53	269.40	3.85	133	77	.20	.00	43.54	78.65
28	9	31	44.47	269.79	1.41	133	77	.32	.00	43.50	78.61
28	9	31	44.40	270.20	1.14	133	77	.42	.00	43.57	78.77
28	9	31	44.33	270.60	3.64	133	77	.32	.00	43.66	78.94
28	9	31	44.26	271.00	6.15	134	77	.31	.00	44.12	79.58
28	9	31	44.19	271.41	8.66	135	77	.26	.00	44.75	80.58
28	9	31	44.11	271.82	11.18	136	77	.24	.00	44.85	80.96
28	9	31	44.29	269.36	3.57	133	77	.20	.00	43.84	78.96
28	9	31	44.22	269.77	1.10	133	77	.21	.00	43.89	79.10
28	9	31	44.16	270.16	1.44	133	77	.30	.00	43.96	79.27
28	9	31	44.09	270.56	3.95	133	77	.20	.00	43.88	79.25
28	9	31	44.02	270.96	6.46	134	77	.31	.00	44.42	80.07
28	9	31	43.95	271.37	8.97	135	77	.26	.00	45.14	81.07
28	9	31	43.87	271.78	11.49	136	77	.24	.00	45.33	81.46

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
28	9	31	44.06	269.25	3.71	133	77*****				
28	9	31	44.00	269.66	1.24	133	77*****				
28	9	31	43.93	270.05	1.31	133	77*****				
28	9	31	43.87	270.45	3.80	133	77*****				
28	9	31	43.80	270.84	6.29	134	77*****				
28	9	31	43.72	271.25	8.80	135	77*****				
28	9	31	43.65	271.66	11.32	136	77*****				
28	9	31	43.83	269.19	3.51	133	77	.30	.00	44.71	80.46
28	9	31	43.76	269.60	1.07	133	77	.31	.00	44.84	80.61
28	9	31	43.70	269.98	1.47	133	77	.40	.00	44.83	80.77
28	9	31	43.63	270.38	3.97	134	77	.31	.00	44.75	80.58
28	9	31	43.56	270.78	6.48	134	77	.30	.00	44.85	80.85
28	9	31	43.49	271.19	9.00	135	77	.36	.00	45.05	81.13
28	9	31	43.42	271.59	11.52	136	77	.23	.00	45.24	81.16
28	9	31	43.60	269.10	3.57	133	77	-.15	.00	44.50	80.17
28	9	31	43.53	269.51	1.10	133	77	-.16	.00	44.63	80.49
28	9	31	43.47	269.89	1.44	133	77	-.20	.00	44.70	80.65
28	9	31	43.40	270.29	3.94	133	77	-.19	.00	44.70	80.46
28	9	31	43.33	270.69	6.45	134	77	-.09	.00	44.98	80.73
28	9	31	43.26	271.09	8.97	135	77	-.16	.00	45.09	81.01
28	9	31	43.19	271.50	11.49	136	77	-.19	.00	45.02	81.03
28	9	31	43.11	271.91	14.01	137	77	-.25	.00	44.87	80.87
28	9	31	43.37	269.02	3.51	133	77	-.54	.00	44.08	79.43
28	9	31	43.30	269.44	1.02	133	77	-.53	.00	44.38	79.94
28	9	31	43.24	269.82	1.53	133	77	-.54	.00	44.45	80.29
28	9	31	43.17	270.21	4.03	134	77	-.51	.00	44.28	79.92
28	9	31	43.10	270.61	6.51	134	77	-.50	.00	44.56	80.38
28	9	31	43.03	271.01	9.02	135	77	-.55	.00	44.68	80.48
28	9	31	42.96	271.41	11.54	136	77	-.55	.00	44.43	79.98
28	9	31	42.88	271.82	14.07	137	77	-.47	.00	43.76	79.28
28	9	32	43.07	269.34	1.07	133	77	-.12	.00	44.94	80.86
28	9	32	43.01	269.72	1.47	133	77	-.04	.00	45.01	81.02
28	9	32	42.94	270.12	3.97	134	77	-.15	.00	44.93	80.82
28	9	32	42.87	270.51	6.48	134	77	-.17	.00	45.20	81.28
28	9	32	42.80	270.91	9.00	135	77	-.12	.00	45.05	80.84
28	9	32	42.73	271.32	11.51	136	77	-.15	.00	44.72	80.32
28	9	32	42.84	269.24	1.21	133	77	-.62	.00	43.87	79.43
28	9	32	42.78	269.61	1.33	133	77	-.52	.00	44.20	80.13
28	9	32	42.71	270.01	3.83	134	77	-.60	.00	44.21	80.12
29	9	20	45.19	270.21	16.13	139	77	.36	.00	43.78	79.93
29	9	20	45.13	270.65	13.60	137	77	.34	.00	43.77	79.95
29	9	20	45.06	271.08	11.08	136	77	.26	.00	44.23	80.64
29	9	20	45.00	271.50	8.56	135	77	.33	.00	45.03	81.87
29	9	20	44.94	271.91	6.08	134	77	.28	.00	45.65	82.56
29	9	20	45.08	269.22	21.21	143	77	.22	.00	42.88	78.75
29	9	20	45.02	269.68	18.67	141	77	.14	.00	43.42	79.46
29	9	20	44.96	270.13	16.13	139	77	.24	.00	43.74	79.94
29	9	20	44.90	270.57	13.60	137	77	.21	.00	43.73	80.14
29	9	20	44.83	270.99	11.08	136	77	.25	.00	44.54	81.19
29	9	20	44.77	271.41	8.59	135	77	.21	.00	45.52	82.96
29	9	20	44.71	271.82	6.08	134	77	.28	.00	45.79	83.11
29	9	20	44.85	269.10	21.47	143	77	.21	.00	43.21	79.22
29	9	20	44.79	269.56	18.93	141	77	.13	.00	43.75	80.10
29	9	20	44.73	270.00	16.42	139	77	.23	.00	43.99	80.40
29	9	20	44.67	270.44	13.89	137	77	.20	.00	43.97	80.42

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
29	9	20	44.61	270.86	11.36	136	77	.24	.00	44.95	82.01
29	9	20	44.55	271.28	8.85	135	77	.20	.00	45.93	83.42
29	9	20	44.48	271.70	6.33	134	77	.27	.00	45.85	83.04
29	9	20	44.62	269.03	21.41	143	77	.17	.00	43.29	79.51
29	9	20	44.56	269.49	18.87	141	77	.20	.00	43.91	80.41
29	9	20	44.50	269.94	16.33	139	77	.18	.00	44.07	80.71
29	9	20	44.44	270.37	13.80	137	77	.16	.00	43.96	80.55
29	9	20	44.37	270.80	11.28	136	77	.20	.00	45.21	82.49
29	9	20	44.31	271.21	8.76	135	77	.27	.00	45.84	83.37
29	9	20	44.25	271.62	6.28	134	77	.22	.00	45.41	82.45
29	9	20	44.32	269.45	18.67	141	77	.21	.00	44.30	80.78
29	9	20	44.26	269.90	16.13	139	77	.31	.00	44.46	81.08
29	9	20	44.20	270.33	13.60	137	77	.29	.00	44.44	81.11
29	9	20	44.14	270.75	11.08	136	77	.33	.00	45.42	82.51
29	9	20	44.08	271.16	8.59	135	77	.28	.00	45.97	83.03
29	9	20	44.01	271.57	6.08	134	77	.35	.00	45.80	82.47
29	9	20	43.95	271.97	3.57	133	77	.27	.00	45.43	81.95
29	9	20	44.09	269.35	18.81	141	77	.22	.00	44.25	80.77
29	9	20	44.03	269.79	16.30	139	77	.20	.00	44.40	81.07
29	9	20	43.97	270.22	13.75	137	77	.18	.00	44.38	81.09
29	9	20	43.91	270.64	11.25	136	77	.22	.00	44.93	81.78
29	9	20	43.85	271.06	8.73	135	77	.17	.00	44.86	81.58
29	9	20	43.79	271.46	6.22	134	77	.13	.00	44.96	81.55
29	9	20	43.72	271.87	3.71	133	77	.28	.00	43.37	78.88
29	9	20	43.86	269.27	18.87	141	77	.26	.00	44.17	80.87
29	9	20	43.80	269.71	16.33	139	77	.36	.00	44.41	81.35
29	9	20	43.74	270.14	13.80	137	77	.22	.00	44.48	81.37
29	9	20	43.68	270.56	11.28	136	77	.26	.00	44.50	81.16
29	9	20	43.62	270.97	8.76	135	77	.33	.00	43.30	78.81
29	9	20	43.56	271.37	6.25	134	77	.28	.00	43.40	79.14
29	9	20	43.49	271.78	3.74	133	77	.20	.00	40.85	74.48
29	9	21	43.63	269.21	18.78	141	77	*****			
29	9	21	43.57	269.65	16.25	139	77	*****			
29	9	21	43.51	270.07	13.72	137	77	*****			
29	9	21	43.45	270.49	11.19	136	77	*****			
29	9	21	43.38	270.90	8.71	135	77	*****			
29	9	21	43.32	271.30	6.19	134	77	*****			
29	9	21	43.26	271.70	3.68	133	77	*****			
29	9	21	43.40	269.13	18.81	141	77	-.17	.00	44.43	81.37
29	9	21	43.34	269.56	16.30	139	77	-.07	.00	44.67	81.67
29	9	21	43.28	269.99	13.77	137	77	-.09	.00	43.44	79.36
29	9	21	43.22	270.40	11.25	136	77	-.05	.00	41.63	76.26
29	9	21	43.15	270.81	8.73	135	77	-.10	.00	41.04	75.34
29	9	21	43.09	271.22	6.22	134	77	-.03	.00	42.53	77.64
29	9	21	43.03	271.61	3.71	133	77	.01	.00	42.77	77.66
29	9	21	43.17	269.04	18.87	141	77	.05	.00	44.93	81.88
29	9	21	43.11	269.48	16.33	139	77	.03	.00	44.64	81.29
29	9	21	43.05	269.90	13.80	137	77	.01	.00	42.19	76.98
29	9	21	42.98	270.32	11.28	136	77	.05	.00	40.38	74.08
29	9	21	42.92	270.73	8.76	135	77	.12	.00	40.92	74.60
29	9	21	42.86	271.12	6.28	134	77	.19	.00	43.80	79.61
29	9	21	42.80	271.53	3.74	133	77	.11	.00	42.74	77.45
29	9	21	42.74	271.91	1.30	133	77	.11	.00	39.69	72.21
29	9	21	42.87	269.42	16.25	139	77	.06	.00	43.94	80.11
29	9	21	42.81	269.84	13.72	137	77	.04	.00	40.79	74.74

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
29	9	21	42.75	270.26	11.20	136	77	.08	.00	38.89	71.65
29	20	49	42.81	271.65	42.33	183	78	*****			
29	20	49	42.75	270.96	39.62	175	78	*****			
29	20	49	43.05	271.60	42.36	183	78	31.24	53.76	45.27	80.47
29	20	49	42.99	270.92	39.68	175	78	21.52	36.99	47.07	83.92
29	20	49	42.93	270.28	37.00	169	78	18.78	32.26	48.11	85.59
29	20	49	42.87	269.68	34.35	164	78	18.23	31.31	48.10	85.54
29	20	49	42.81	269.11	31.72	159	78	17.38	29.84	48.12	85.60
29	20	49	43.28	271.57	42.42	183	78	24.61	42.32	46.40	82.64
29	20	49	43.22	270.87	39.71	176	78	19.16	32.92	47.68	84.91
29	20	49	43.16	270.23	37.03	169	78	17.61	30.23	48.20	85.91
29	20	49	43.10	269.62	34.38	164	78	17.18	29.49	48.18	85.69
29	20	49	43.05	269.06	31.75	159	78	16.68	28.64	48.12	85.63
29	20	49	43.51	271.45	42.21	182	78	19.63	33.73	46.82	84.24
29	20	49	43.45	270.76	39.50	175	78	17.85	30.65	47.49	85.05
29	20	49	43.39	270.12	36.82	169	78	16.99	29.16	47.92	85.85
29	20	49	43.33	269.52	34.17	163	78	16.43	28.19	47.73	85.80
29	20	49	43.74	271.38	42.15	182	78	16.59	28.48	46.47	85.04
29	20	49	43.68	270.70	39.47	175	78	15.65	26.86	46.88	85.81
29	20	49	43.62	270.05	36.79	169	78	15.40	26.43	47.32	86.32
29	20	49	43.56	269.45	34.14	163	78	15.44	26.50	47.04	85.84
29	20	49	43.97	271.34	42.21	182	78	15.81	27.14	46.41	84.40
29	20	49	43.91	270.65	39.50	175	78	15.25	26.16	46.73	85.04
29	20	49	43.86	270.00	36.82	169	78	14.90	25.55	47.08	85.51
29	20	49	43.80	269.39	34.17	163	78	15.31	26.27	46.80	85.08
29	20	49	44.21	271.29	42.21	182	78	17.31	29.72	46.93	83.24
29	20	49	44.15	270.59	39.50	175	78	16.61	28.51	47.25	83.69
29	20	49	44.09	269.94	36.85	169	78	15.65	26.84	47.51	84.27
29	20	49	44.03	269.33	34.17	163	78	15.93	27.33	47.31	84.00
29	20	49	44.44	271.28	42.36	183	78	17.34	29.77	46.73	82.84
29	20	49	44.38	270.58	39.68	175	78	16.64	28.55	46.96	83.29
29	20	49	44.32	269.92	37.00	169	78	15.67	26.89	47.22	83.87
29	20	49	44.27	269.31	34.35	164	78	15.48	26.56	47.03	83.51
29	20	49	44.67	271.17	42.18	182	78	*****			
29	20	49	44.61	270.47	39.47	175	78	*****			
29	20	49	44.55	269.81	36.79	169	78	*****			
29	20	49	44.49	269.20	34.14	163	78	*****			
29	20	49	44.91	271.12	42.21	182	78	16.20	27.80	46.72	82.22
29	20	49	44.85	270.41	39.50	175	78	16.69	28.64	46.78	82.18
29	20	49	44.79	269.76	36.85	169	78	17.15	29.44	46.96	82.64
29	20	49	44.73	269.14	34.17	163	78	16.36	28.08	46.85	82.54
29	20	49	45.14	271.11	42.36	183	78	15.35	26.34	45.93	81.73
29	20	49	45.08	270.40	39.68	175	78	15.95	27.38	45.99	81.88
29	20	49	45.02	269.74	37.00	169	78	16.41	28.17	46.33	82.35
29	20	49	44.96	269.12	34.35	163	78	15.98	27.42	46.23	82.32
29	20	49	45.20	269.06	34.38	164	78	15.14	25.97	45.64	82.03
30	9	9	45.16	270.39	29.09	152	77	.27	.00	39.64	73.04
30	9	9	45.10	270.92	26.51	149	77	.37	.00	39.73	73.22
30	9	9	45.04	271.41	23.97	146	77	.36	.00	40.26	73.94
30	9	9	44.98	271.89	21.41	143	77	.34	.00	39.18	72.49
30	9	9	45.05	269.25	34.11	161	77	*****			
30	9	9	44.99	269.82	31.52	156	77	*****			
30	9	9	44.92	270.37	28.89	152	77	*****			
30	9	9	44.86	270.88	26.34	149	77	*****			
30	9	9	44.80	271.38	23.77	146	77	*****			

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
30	9	9	44.74	271.85	21.21	143	77	*****	*****	*****	*****
30	9	9	44.82	269.15	34.29	161	77	.45	.00	40.39	73.74
30	9	9	44.76	269.72	31.67	156	77	.55	.00	40.89	74.35
30	9	9	44.69	270.26	29.07	152	77	.54	.00	40.83	74.32
30	9	9	44.63	270.78	26.48	149	77	.52	.00	40.83	74.32
30	9	9	44.57	271.28	23.91	146	77	.51	.00	41.10	74.51
30	9	9	44.51	271.75	21.36	143	77	.49	.00	39.84	72.69
30	9	9	44.58	269.13	34.08	161	77	.22	.00	39.35	71.78
30	9	9	44.52	269.70	31.46	156	77	.20	.00	39.94	72.75
30	9	9	44.46	270.24	28.86	152	77	.19	.00	40.05	73.08
30	9	9	44.39	270.75	26.28	149	77	.17	.00	40.40	73.79
30	9	9	44.33	271.24	23.74	145	77	.16	.00	41.10	75.06
30	9	9	44.27	271.71	21.19	143	77	.14	.00	40.29	73.78
30	9	9	44.35	269.06	34.11	161	77	.23	.00	38.86	71.07
30	9	9	44.29	269.62	31.52	156	77	.21	.00	39.19	71.68
30	9	9	44.22	270.16	28.89	152	77	.32	.00	39.47	72.36
30	9	9	44.16	270.67	26.34	149	77	.29	.00	40.43	73.80
30	9	9	44.10	271.16	23.77	146	77	.28	.00	41.31	75.24
30	9	9	44.04	271.63	21.21	143	77	.26	.00	41.02	74.86
30	9	10	44.06	269.52	31.67	156	77	.31	.00	39.38	72.09
30	9	10	44.00	270.06	29.07	152	77	.30	.00	39.67	72.77
30	9	10	43.93	270.57	26.48	149	77	.28	.00	40.46	74.03
30	9	10	43.87	271.06	23.91	146	77	.27	.00	40.90	74.94
30	9	10	43.81	271.53	21.36	143	77	.25	.00	40.69	74.56
30	9	10	43.75	271.98	18.81	141	77	.29	.00	40.93	74.88
30	9	10	43.82	269.50	31.46	156	77	.40	.00	40.45	74.05
30	9	10	43.76	270.03	28.86	152	77	.39	.00	40.55	74.55
30	9	10	43.70	270.54	26.28	149	77	.37	.00	41.00	75.09
30	9	10	43.64	271.02	23.74	146	77	.35	.00	41.26	75.46
30	9	10	43.58	271.49	21.19	143	77	.45	.00	40.62	74.72
30	9	10	43.52	271.94	18.64	141	77	.37	.00	41.03	75.04
30	9	10	43.59	269.43	31.52	156	77	-.05	.00	40.87	74.57
30	9	10	43.53	269.96	28.92	152	77	-.07	.00	40.89	74.71
30	9	10	43.46	270.46	26.34	149	77	-.11	.00	41.24	75.25
30	9	10	43.40	270.95	23.77	146	77	-.14	.00	41.68	75.79
30	9	10	43.34	271.41	21.21	143	77	-.17	.00	41.12	74.87
30	9	10	43.28	271.86	18.67	141	77	-.14	.00	41.62	75.54
30	9	10	43.36	269.30	31.81	157	77	-.92	.00	40.71	74.09
30	9	10	43.30	269.83	29.21	153	77	-.92	.00	40.47	74.06
30	9	10	43.24	270.34	26.63	149	77	-.93	.00	40.83	74.42
30	9	10	43.18	270.82	24.06	146	77	-.81	.00	41.18	75.15
30	9	10	43.12	271.29	21.50	143	77	-.81	.00	40.54	74.41
30	9	10	43.06	271.74	18.95	141	77	-.88	.00	41.21	75.27
30	9	10	43.12	269.31	31.46	156	77	*****	*****	*****	*****
30	9	10	43.06	269.84	28.86	152	77	*****	*****	*****	*****
30	9	10	43.00	270.34	26.28	149	77	*****	*****	*****	*****
30	9	10	42.94	270.81	23.74	146	77	*****	*****	*****	*****
30	9	10	42.88	271.27	21.19	143	77	*****	*****	*****	*****
30	9	10	42.82	271.72	18.64	141	77	*****	*****	*****	*****
30	9	10	42.89	269.23	31.52	156	77	.56	.00	41.87	76.05
30	9	10	42.83	269.76	28.92	152	77	.55	.00	41.55	75.65
30	9	10	42.77	270.26	26.34	149	77	.53	.00	41.64	75.83
30	9	10	42.71	270.74	23.77	146	77	.52	.00	41.90	76.38
30	20	38	42.92	271.87	31.93	159	78	16.33	27.81	45.94	81.54
30	20	38	42.86	271.33	29.32	155	78	16.43	27.97	46.13	81.75

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
30	20	38	42.80	270.82	26.73	151	78	16.39	27.91	45.87	81.43
30	20	38	42.75	270.33	24.15	148	78	17.55	29.91	45.09	80.25
30	20	38	43.15	271.77	31.75	159	78	16.59	28.26	45.39	82.41
30	20	38	43.09	271.23	29.14	155	78	16.12	27.43	45.41	82.31
30	20	38	43.03	270.72	26.55	151	78	15.75	26.81	44.80	81.00
30	20	38	42.97	270.23	23.98	148	78	16.35	27.84	43.68	79.15
30	20	38	42.92	269.76	21.42	145	78	17.17	29.26	42.77	77.50
30	20	38	42.86	269.30	18.87	143	78	15.45	26.28	43.97	79.75
30	20	38	43.37	271.65	31.51	158	78	*****			
30	20	38	43.31	271.12	28.91	154	78	*****			
30	20	38	43.26	270.60	26.32	151	78	*****			
30	20	38	43.20	270.12	23.78	147	78	*****			
30	20	38	43.14	269.65	21.22	145	78	*****			
30	20	38	43.09	269.19	18.67	142	78	*****			
30	20	38	43.61	271.63	31.72	159	78	22.83	39.03	44.97	80.10
30	20	38	43.55	271.09	29.11	154	78	18.79	32.05	45.08	80.60
30	20	38	43.49	270.58	26.53	151	78	16.63	28.33	44.48	79.52
30	20	38	43.44	270.08	23.95	148	78	16.86	28.72	43.34	77.61
30	20	38	43.38	269.61	21.39	145	78	17.55	29.92	42.70	76.31
30	20	38	43.32	269.15	18.84	143	78	15.57	26.51	44.16	78.90
30	20	38	43.84	271.57	31.72	159	78	28.15	48.24	44.06	78.81
30	20	38	43.78	271.02	29.11	154	78	22.21	37.94	44.60	79.73
30	20	38	43.73	270.51	26.53	151	78	16.36	27.86	44.60	79.77
30	20	38	43.67	270.01	23.95	148	78	17.16	29.25	42.60	76.38
30	20	38	43.61	269.54	21.42	145	78	18.20	31.03	42.13	75.70
30	20	38	43.55	269.08	18.84	143	78	15.49	26.37	44.11	79.24
30	20	38	44.07	271.47	31.54	158	78	29.78	51.05	42.40	78.05
30	20	38	44.01	270.92	28.94	154	78	23.02	39.34	43.29	79.67
30	20	38	43.95	270.40	26.35	151	78	14.70	25.00	43.91	80.49
30	20	38	43.90	269.91	23.81	147	78	15.76	26.82	41.21	76.05
30	20	38	43.84	269.44	21.25	145	78	17.75	30.26	40.48	74.81
30	20	38	44.36	271.98	34.20	163	78	30.57	52.40	41.99	77.08
30	20	38	44.30	271.41	31.60	158	78	30.20	51.77	42.23	77.28
30	20	38	44.25	270.87	29.00	154	78	23.21	39.67	43.47	79.39
30	20	38	44.19	270.35	26.41	151	78	14.67	24.94	44.61	81.23
30	20	38	44.13	269.85	23.84	147	78	13.48	22.90	42.78	78.33
30	20	38	44.07	269.37	21.28	145	78	16.20	27.59	40.83	74.70
30	20	38	44.59	271.93	34.23	163	78	29.95	51.34	42.49	76.21
30	20	38	44.54	271.35	31.60	158	78	31.23	53.56	42.65	76.37
30	20	38	44.48	270.80	29.00	154	78	23.99	41.03	43.98	78.83
30	20	38	44.42	270.28	26.41	151	78	16.27	27.70	45.29	81.19
30	20	38	44.36	269.78	23.84	147	78	13.77	23.39	44.86	80.40
30	20	38	44.31	269.30	21.30	145	78	14.58	24.79	42.91	77.14
30	20	38	44.83	271.90	34.37	163	78	28.06	48.09	42.50	76.34
30	20	38	44.77	271.31	31.75	159	78	31.00	53.16	42.31	75.91
30	20	38	44.71	270.76	29.14	154	78	24.00	41.04	43.72	78.41
30	20	38	44.66	270.24	26.55	151	78	16.87	28.74	45.30	80.89
30	20	38	44.60	269.74	24.01	148	78	15.08	25.65	45.56	81.12
30	20	38	44.54	269.25	21.45	145	78	14.11	23.98	44.13	78.97
30	20	38	45.06	271.79	34.17	163	78	30.50	52.29	41.85	75.35
30	20	38	45.00	271.21	31.57	158	78	29.88	51.23	42.17	75.34
30	20	38	44.94	270.66	28.97	154	78	21.81	37.27	43.59	77.82
30	20	38	44.88	270.13	26.38	151	78	16.70	28.44	44.90	80.13
30	20	38	44.83	269.63	23.81	147	78	16.09	27.40	45.08	80.23
30	20	38	44.77	269.14	21.25	145	78	14.77	25.12	44.09	78.73

Table 1. Continued.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
30	20	39	45.18	270.62	29.11	154	78	*****			
30	20	39	45.12	270.09	26.52	151	78	*****			
30	20	39	45.06	269.58	23.95	148	78	*****			
30	20	39	45.00	269.10	21.39	145	78	*****			
31	20	27	42.90	271.56	16.27	140	78	21.67	37.34	38.84	70.11
31	20	27	42.84	271.13	13.74	139	78	21.89	37.72	38.66	69.68
31	20	27	42.79	270.71	11.21	137	78	24.54	42.29	37.97	68.40
31	20	27	42.73	270.30	8.72	136	78	28.99	49.99	37.61	67.79
31	20	27	43.19	271.93	18.84	142	78	22.26	38.37	36.59	65.81
31	20	27	43.13	271.50	16.33	141	78	21.88	37.71	38.03	68.40
31	20	27	43.08	271.06	13.79	139	78	24.59	42.38	36.64	66.10
31	20	27	43.02	270.64	11.27	138	78	30.55	52.71	35.25	63.44
31	20	27	42.96	270.23	8.75	136	78	35.95	62.05	35.58	63.72
31	20	27	42.90	269.82	6.23	136	78	38.99	67.29	35.74	63.68
31	20	27	42.84	269.42	3.72	135	78	46.49	80.25	34.82	62.21
31	20	27	42.78	269.00	1.24	135	78	51.94	89.67	35.09	62.56
31	20	27	43.42	271.87	18.90	143	78	20.31	35.01	38.23	68.47
31	20	27	43.37	271.43	16.36	141	78	24.32	41.93	36.45	65.95
31	20	27	43.31	270.99	13.82	139	78	32.48	56.04	33.58	60.69
31	20	27	43.25	270.57	11.30	138	78	38.09	65.73	34.54	62.29
31	20	27	43.19	270.15	8.78	136	78	42.54	73.43	35.31	63.29
31	20	27	43.13	269.74	6.26	136	78	48.18	83.18	34.33	61.39
31	20	27	43.07	269.34	3.74	135	78	51.41	88.76	34.89	62.00
31	20	27	43.65	271.78	18.81	142	78	22.43	38.66	37.91	68.36
31	20	27	43.60	271.33	16.27	140	78	31.89	55.03	33.69	61.09
31	20	27	43.54	270.90	13.74	139	78	38.74	66.87	33.34	60.26
31	20	27	43.48	270.48	11.21	137	78	42.69	73.69	33.78	60.84
31	20	27	43.42	270.06	8.72	136	78	49.28	85.08	32.29	57.93
31	20	27	43.36	269.65	6.20	136	78	53.27	91.96	32.79	58.41
31	20	27	43.30	269.25	3.69	135	78	52.94	91.41	34.49	61.42
31	20	27	43.89	271.71	18.84	142	78	*****			
31	20	27	43.83	271.27	16.33	140	78	*****			
31	20	27	43.77	270.83	13.79	139	78	*****			
31	20	27	43.71	270.41	11.27	137	78	*****			
31	20	27	43.65	269.99	8.75	136	78	*****			
31	20	27	43.59	269.57	6.23	136	78	*****			
31	20	27	43.53	269.17	3.72	135	78	*****			
31	20	27	44.12	271.63	18.81	142	78	32.62	56.30	34.52	61.93
31	20	27	44.06	271.18	16.27	140	78	36.63	63.22	34.23	61.56
31	20	27	44.00	270.74	13.74	139	78	42.77	73.84	31.78	57.20
31	20	27	43.94	270.32	11.21	137	78	47.79	82.50	31.00	56.01
31	20	27	43.88	269.90	8.69	136	78	51.65	89.18	32.56	58.33
31	20	27	43.82	269.48	6.17	136	78	55.04	95.03	34.37	61.04
31	20	27	43.76	269.07	3.66	135	78	54.01	93.25	35.54	62.84
31	20	27	44.35	271.56	18.81	142	78	38.52	66.48	34.34	62.15
31	20	27	44.29	271.10	16.27	140	78	41.94	72.38	33.52	60.60
31	20	27	44.23	270.67	13.74	139	78	47.25	81.56	32.56	58.77
31	20	27	44.17	270.24	11.21	137	78	50.84	87.77	33.08	59.46
31	20	27	44.12	269.82	8.72	136	78	53.52	92.39	33.85	60.50
31	20	27	44.06	269.40	6.20	136	78	55.96	96.61	34.79	61.96
31	20	27	44.64	271.95	21.39	145	78	39.68	68.48	33.99	61.33
31	20	27	44.58	271.49	18.84	142	78	44.10	76.12	33.68	60.34
31	20	27	44.52	271.04	16.33	140	78	47.16	81.41	33.29	59.98
31	20	27	44.46	270.60	13.79	139	78	49.98	86.28	32.94	59.50
31	20	27	44.41	270.16	11.27	137	78	53.46	92.29	32.60	58.73



Table 1. Concluded.

D	H	M	LAT	LONG	ZENAN	PXLN	PXWD	FSWRD	USWRD	FLWRD	ULWRD
31	20	27	44.35	269.74	8.75	136	78	56.01	96.71	33.11	59.57
31	20	27	44.29	269.32	6.23	136	78	57.75	99.70	34.74	62.16
31	20	28	44.88	271.97	21.91	145	78	40.43	69.79	34.81	62.57
31	20	28	44.82	271.50	19.35	143	78	45.81	79.07	33.18	59.78
31	20	28	44.77	271.05	16.81	141	78	48.87	84.36	32.97	59.42
31	20	28	44.71	270.60	14.28	139	78	50.98	88.01	31.66	57.36
31	20	28	44.65	270.17	11.75	138	78	54.70	94.43	31.14	56.28
31	20	28	44.59	269.74	9.23	137	78	57.25	98.85	31.74	57.30
31	20	28	44.53	269.32	6.71	136	78	58.51	101.02	33.55	60.15
31	20	28	45.11	271.84	21.59	145	78	41.31	71.30	35.67	64.07
31	20	28	45.05	271.37	19.04	143	78	45.85	79.15	33.88	61.14
31	20	28	44.99	270.91	16.50	141	78	48.20	83.22	32.71	59.03
31	20	28	44.93	270.47	13.96	139	78	50.79	87.68	30.53	55.63
31	20	28	44.87	270.03	11.44	137	78	55.22	95.33	29.66	53.96
31	20	28	44.81	269.61	8.94	136	78	58.25	100.57	31.04	56.32
31	20	28	44.75	269.19	6.43	136	78	56.07	96.80	32.76	58.90
31	20	28	45.17	270.44	14.25	139	78	51.25	88.47	29.33	53.91
31	20	28	45.11	270.00	11.72	138	78	54.36	93.86	28.55	52.54
31	20	28	45.05	269.57	9.20	137	78	55.74	96.23	30.72	56.20
31	20	28	44.99	269.14	6.68	136	78	52.85	91.23	32.09	58.66



## Report Documentation Page

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16. Abstract  Tables are presented which show ERBE/NOAA-9 radiances, resolution size, and pixel location for the FIRE/SRB Wisconsin experiment region from October 1 through October 31, 1986. Also presented is an analysis of the ERBE point spread function used to estimate pixel resolution size for the scanner instrument.			
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